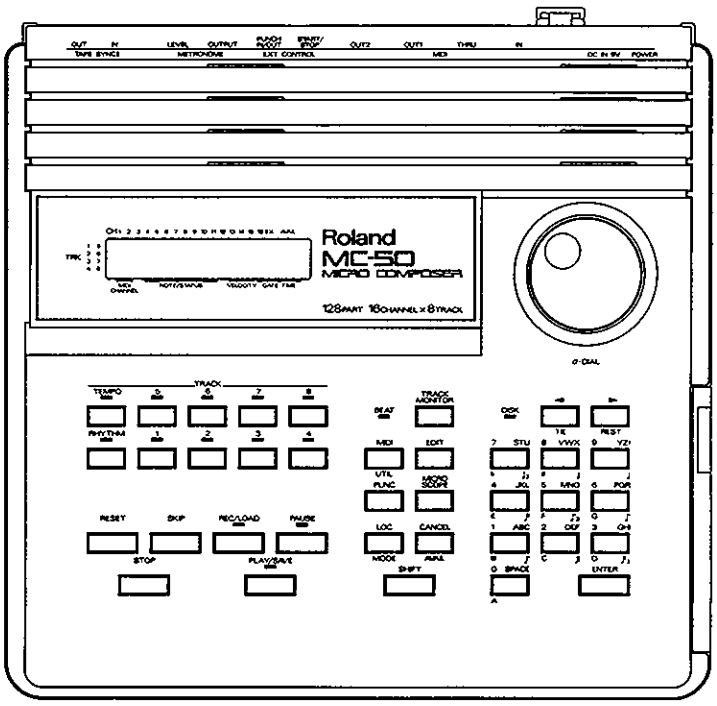
Roland

MICRO COMPOSER

MC-50

Owner's Manual I
(USER'S GUIDE)



For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

ROLAND MICRO COMPOSER MC-50

(Gerät. Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Amtsbl. Vfg 1046/1984

(Amtsblattverfügung)

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Roland Corporation Osaka/Japan

Name des Herstellers/Importeurs

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

CLASS B **NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

CONTENTS

☐ Introduction

Thank you for purchasing the Roland MC - 50 Micro Composer. In order to take full advantage of the MC - 50 and enjoy long and trouble - free use, please read these manuals (I and II) carefully.

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■ FEATURES

SUPER - MRC is the advanced sequencing software used by the world - famous MC - 500mk II and MC series sequencers. Songs you create using SUPER - MRC can be connected in a specified order of performance by using the SUPER - MRP performance software, allowing you to automate your live performances. The MC - 50 includes both these software programs in its internal memory, and can start up either program as soon as the power is turned on. (Normally, SUPER - MRC will be started.) In addition, software (MRB - 500, etc., sold separately) for previous models of the MC series can also be used, allowing you to extend functionality by software upgrades.
The simple external design and high cost - effectiveness of the MC - 50 brings professional high - performance high - capacity sequencing even closer.

SUPER - MRC (recording system)

SUPER - MRC is a software program that lets you create and play-back performance data.
Two methods of recording are provided; Realtime Recording to capture your performance just as you play, and Step Recording which allows you to enter musical data one step at a time. A wide variety of editing functions are provided, allowing you to make detailed corrections and edits to the recorded data, to bring your composition to perfection.

- Memory capacity is approximately 40,000 notes in internal memory, and approximately 150,000 notes on disk. A single song can contain up to 9999 measures, and internal memory can contain 8 songs.
- Each of the Phrase Tracks can store musical data of all MIDI channels. (When compared with other sequencers that are able to store only one channel per track, each track of the MC - 50 is equivalent to a 16 - track sequencer.) The MC - 50 has 8 of these Phrase Tracks, for a total of 128 tracks of MIDI messages.
- The Quantize function lets you specify a percentage by which to correct the timing of data recorded in realtime. This allows you to tighten up the time while preserving the natural human feel of realtime recording.
- The Microscope editing function lets you perform step input or continuous editing for individual steps. In addition, you can use step input to input just the note pitches, and then use an external keyboard for realtime input of the gate time and note - on timing.
- Up to 240 Rhythm Patterns can be combined into a Rhythm Track for a song. Patterns can be created by realtime input from a MIDI pad or MIDI keyboard, and you can even quantize each rhythm instrument independently. Level can be adjusted over 8 steps for each note (you can freely specify each level over 127 steps), and Resolution can be specified as finely as a 32nd note. Since you can specify a MIDI channel independently for each rhythm instrument, you can use two or more MIDI rhythm sound modules to play the rhythm sounds.
- The Tempo Track can be input not only from the MC - 50's Alpha - dial or numeric keys, but also input in realtime using the bender, wheel, or keyboard of an external MIDI keyboard, for very flexible tempo control.
- The MC - 50 features two independent MIDI OUT connectors. Since you can specify the MIDI OUT used by each track, you can simultaneously control 16 channels × 2 MIDI OUTs, for a maximum of 32 MIDI sound modules controlled independently.
- Also provided are a Track Monitor function which lets you check the data being transmitted from each track, and a MIDI Monitor function which lets you check the data being received at MIDI IN.
- You can specify Locate Points in a song (a total of 10 locations, with two locations automatically set to the beginning and end of the recording), and move instantly to a desired Locate Point. Each point can be given a name such as "Intro".
- Functions are also provided to copy between songs in internal memory, and combine two or more songs into a single song.
- Data created by the MRC - 500/300 can be converted and loaded into the MC - 50.
- The Time Calculation function lets you check the total time of the song, or the time between specified points, while automatically taking into account any tempo changes.
- The MC - 50 is able to synchronize to MIDI clock messages from other sequencers or rhythm machines, and also features a Tape Sync interface for synchronized playback with a multitrack tape recorder (MTR). Since the MC - 50's tape sync includes data that indicates the absolute position, you can continue synchronizing even after stopping and restarting the MTR.
- System Configuration data can be stored on disk to automatically recall settings such as MIDI soft thru on/off, or to automatically load songs from disk.

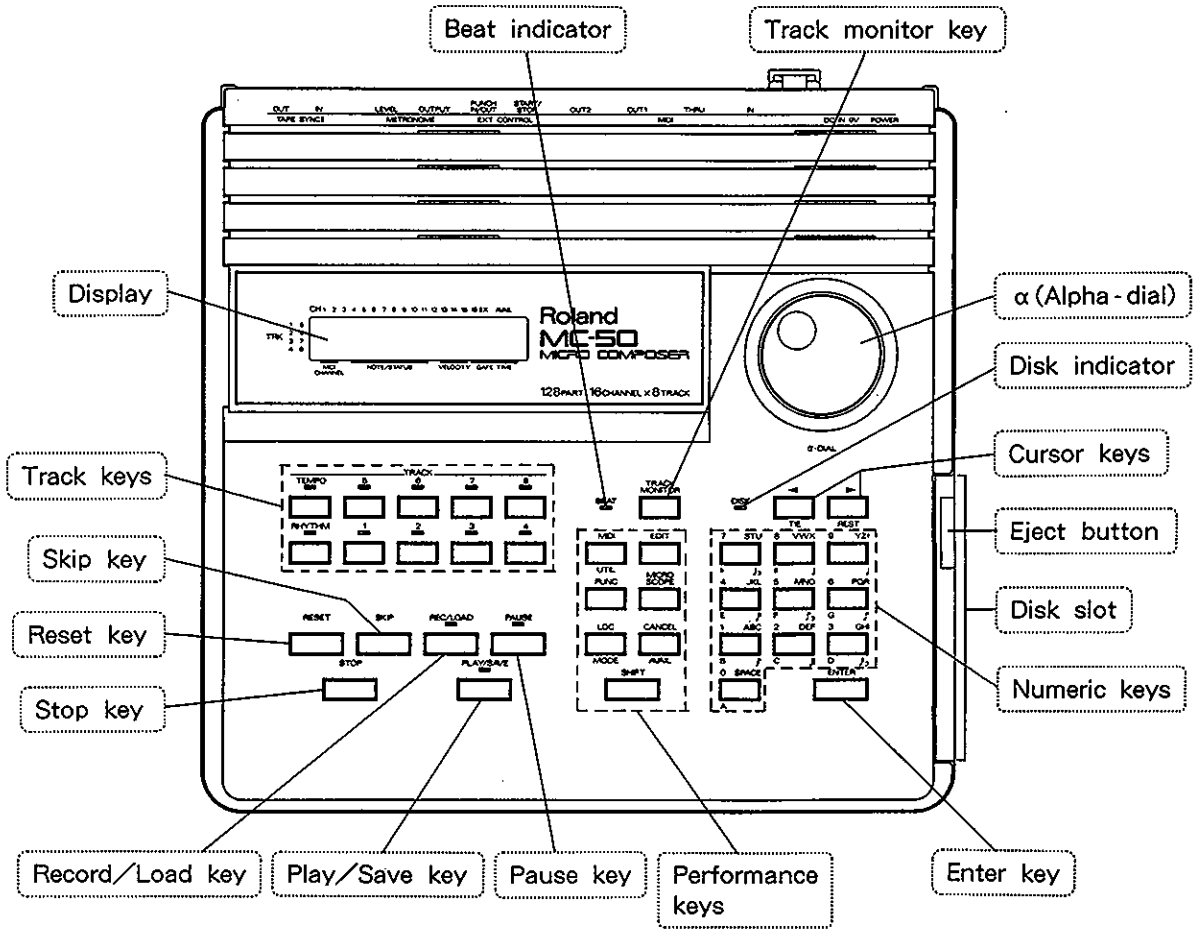
SUPER - MRP (performance system)

SUPER - MRP is a software program that lets you specify the order in which song data created using SUPER - MRC will be played back. Up to 99 songs can be played back in succession, and you can also specify repeat playback. By storing the order of songs on a floppy disk, you can start continuous playback simply by pressing the MC - 50 play button (or by pressing a connected foot switch).

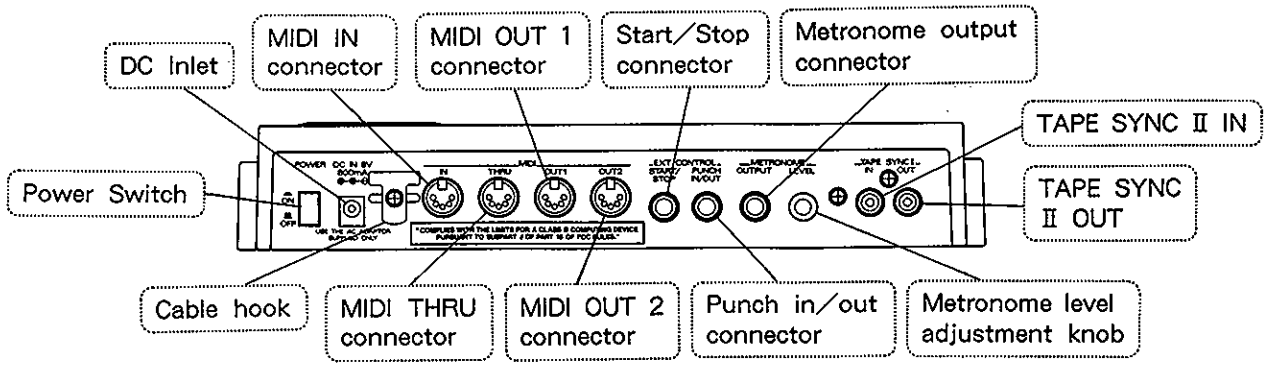
- A time interval between each song can be specified.
- Songs can be deleted or inserted.
- Each track being played can be muted.
- You can locate to specified songs or measures.
- SUPER - MRC MIDI settings such as Bulk (exclusive data for synthesizers, etc.), Transmit Channel, Clock, Soft Thru, and Sync can be used.

■FRONT AND REAR PANELS

< Front panel >



< Rear panel >



■ PRECAUTIONS

Please use only the included AC adaptor. Using other AC adaptors can result in faulty operation and malfunctions.

＊Unfortunately, it may be impossible to restore the contents of data stored on disk once it has been corrupted. Roland assumes no liability concerning such loss of data.

☐ Power supply

- When the power is turned off, the contents of internal memory will be lost, and cannot be recalled. Be careful not to accidentally turn the power switch off, or pull out the power cable. Be sure to save important data regularly.
- Avoid connecting the MC - 50 to an AC outlet shared by devices which generate noise (motors, lighting dimmers, etc.) or devices which consume a large amount of power.
- Be sure to plug the AC adaptor into an AC outlet of the correct voltage.
- Do not place heavy objects on the power cable, or allow it to be stepped on.
- When unplugging the AC adaptor from the AC outlet, always grasp the plug, not the cable, to avoid breaking the power cable or causing a short circuit.
- If you will not be using the unit for a long period of time, unplug the AC adaptor from the AC outlet.

☐ Location

- Place the MC - 50 in as level a position as possible. If placed at an extreme angle, the disk drive may not function correctly. The permissible range of angles is 20 degrees upward and 0 degrees downward.
- Using or storing the MC - 50 in the following locations may result in malfunctions.
  - ○Locations of high temperature (in direct sunlight, near heating equipment, or on top of equipment which generates heat).
  - ○Nearby water vapor (bathrooms, wash stands, damp walls) or locations of high humidity.
  - ○Dusty locations.
  - ○Locations of heavy vibration.
- Operating the MC - 50 nearby a television or radio may cause interference such as blurred screen colors or radio static. In such cases, locate the MC - 50 at a greater distance.
- Do not subject the MC - 50 to strong shocks, and avoid moving the unit while it is operating.

☐ Care

- Wipe the unit with a soft dry cloth, or use a tightly - wrung damp cloth to remove dirt and then wipe with a dry cloth.
- Never use solvents such as benzine, thinner, or alcohol, since these will cause deformation or discolor the finish.

☐ Other

- Do not allow foreign material (coins, pins, etc.) or liquids (water, soft drinks, alcohol, etc.) to enter the unit.
- Do not press hard on or strike the display. During operation, you may notice some sound coming from the display, but this is not a malfunction.
- Before using the MC - 50 in a foreign country, consult your local Roland service station.
- If the MC - 50 begins performing abnormally or you notice anything out of the ordinary, immediately cease use and consult the dealer where you purchased the unit or a Roland service station.

☐ Floppy disk handling

- Floppy disks are very delicate. Observe the following precautions.
  - ○Do not touch the magnetic surface.
  - ○Do not bend floppy disks or place objects on top of them.
  - ○Do not store floppy disks in dusty locations.
  - ○Do not place floppy disks in direct sunlight, near heaters, or in closed automobiles.
  - ○Do not allow floppy disks to come near strong magnetic fields such as those produced by magnets or speakers.
- Floppy disks have a write protect slider to prevent data from accidentally being erased. Leave the protect slider in the Protect position unless you are writing data to the floppy disk.
- Before turning the power on or off, remove the floppy disk from the disk drive.
- Never attempt to remove the floppy disk when the disk drive is operating (when the indicator is lit). Doing so can damage the disk, destroying the data and making the disk unusable.
- As a precaution against accidents, make backup copies of valuable disks.
- When attaching a label to a floppy disk, be sure the label is firmly attached. If the label comes off while the disk is in the drive, it will be impossible to eject the disk.

■HOW TO USE THIS MANUAL

The MC - 50 manual consists of two books.
Owner's Manual I (Owner's Guide)
Owner's Manual II (Reference)

This manual I (Owner's Guide) is intended especially for those who are using a sequencer for the first time, and explains how to connect the MC - 50 to a MIDI device and make a simple recording. When you need a more detailed explanation, read through this book once, and refer to Owner's Manual II (Reference) as necessary. If you are already familiar with sequencers, it may not be necessary for you to read this entire book. The following chart shows how to use the MC - 50 manual depending on your experience and needs.

	If you are using a sequencer for the first time	If you are already familiar with sequencers
①INTRODUCTION	○	△
②CONNECTIONS	○	×
③TURN THE POWER ON	○	×
④HARDWARE	○	△
⑤MODES OF OPERATION	○	○
⑥INITIALIZING A DISK	○	△
⑦BASIC OPERATION	○	○
⑧MULTITRACK RECORDING	○	△
⑨DATA EDITING	○	○
⑩VARIOUS USEFUL PROCEDURE	△	△
⑪APPLICATION GUIDE	△	△
⑫ABOUT MIDI STATUS	△	△
⑬READING MUSIC	△	×

○ ··· be sure to read　　△ ··· read when necessary　　×··· no need to read

Conventions used in this manual

The following symbols are used in this manual to explain operation. Especially in chapters 5 and beyond, the explanation uses mainly these symbols, so please be aware of what each symbol means.

- Characters surrounded by [ ] indicate panel keys. For example, [PLAY] indicates the Play key, and [ENTER] indicates the Enter key. When one of these keys appears in a procedure, it means that you are to press the key once.

- An indication of "(☞ see I /page **)" refers to a page in manual I (Introduction), and "(☞ see II /page **)" refers to a page in manual II (Reference).

- An indication of [SHIFT] + [MODE] means that you should "hold [SHIFT] and press [MODE]". Be sure to press the keys in the correct order.

- Indications such as [◀][▶] → Numeric keys/Alpha - dial → [ENTER] mean that you should follow the steps in the order indicated by the arrows. This example means "use the left/right cursor keys to move the cursor, use the numeric keys or Alpha - dial to set the value, and finally press the Enter key once."

- The character indicates an explanation of terminology.

1 INTRODUCTION

When you turn the MC - 50 power on without performing a special operation, the SUPER - MRC sequencer software will normally start up, and the MC - 50 will function as a "sequencer". It is possible to start up the other SUPER - MRP performance software, or to load another software program from a different disk to make the MC - 50 function as something other than a sequencer. However, this section will explain only about the hardware of the MC - 50, and how it will function when running the SUPER - MRC software.

■ What is the MC - 50 ?

The MC - 50 is a device which runs the SUPER - MRC software to record musical performances from an electronic instrument such as a synthesizer or electric piano. This type of device is generally known as a **sequencer**. The MC - 50 transmits and receives musical data using a world - wide standard called **MIDI**.

Regardless of the manufacturer, any synthesizer or electronic piano that is compatible with MIDI can be connected to the MC - 50. When you perform on a MIDI instrument, the MC - 50 records your playing as digital data, and stores this data in internal memory. (This is known as **realtime recording**.) The MC - 50 can then transmit this data to make another connected device play automatically. Since a large number of MIDI instruments can be controlled at once, the MC - 50 can act as the "conductor" for an entire MIDI orchestra. The MC - 50 is ideal for people who wish to create music but are not able to play an instrument, since it allows you to enter notes and rests one by one using the front panel keys, etc. (This is known as **step recording**.)

■ Internal memory and floppy disks

A tape recorder records musical data directly onto the tape itself. This means that unless a tape has been loaded into the recorder, it is impossible to record. The MC - 50, however, records musical data into its **internal memory**, meaning that you can record and playback data using just the MC - 50 by itself. However if you turn the power off, this musical data in the MC - 50 internal memory will be lost. If you wish to keep the musical data you record, you must save it to an external storage medium (corresponding to the tape of a tape recorder).

The MC - 50 uses **3.5 inch 2DD micro floppy disks** as its storage medium. (These will be referred to as "floppy disks".) Page 7 explains some precautions you should observe when handling floppy disks.

Internal memory:

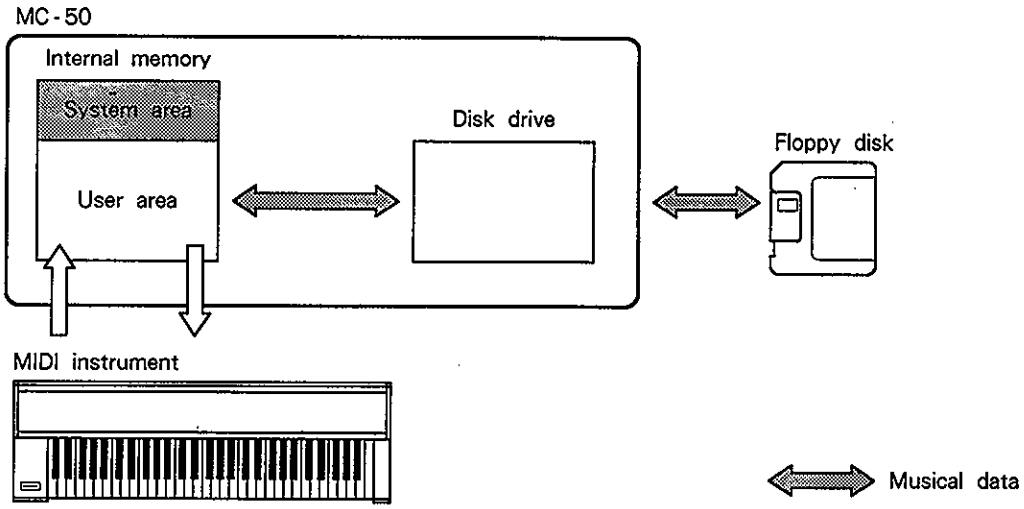
This refers to computer circuitry of two varieties; **RAM** (Random Access Memory) and **ROM** (Read Only Memory). Data in RAM can be freely rewritten by the user, but is lost when the power is turned off. On the other hand, ROM is only for reading. It is not possible for the user to store his own data into ROM, but the contents of ROM (originally set at the factory) are preserved even when the power is turned off.

Storage media:

This refers to some type of external storage that can preserve the data from internal memory. There are many types of **storage media**; floppy disk (3.5/5/8 inch), magnetic tape, hard disk, and others.

■ How the MC-50 is organized

The MC-50 is organized as follows.



○ Internal memory

The internal memory of the MC-50 is divided into the **System area** and the **User area**.

System area (ROM)

This area contains the programs that make the MC-50 function as a **sequencer** or as a **performance system**. The data in the system area is preserved even when the power is turned off, but cannot be saved to floppy disk or edited. With the normal settings, the sequencer program will be loaded when the power is turned on.

Performance system:

This software allows you to playback up to 99 previously created songs in any specified order (☞ II /page 167).

User area (RAM)

This area temporarily contains the musical data you create or record. This data can be freely exchanged or edited. However there is a limit to the amount of data that this area can contain, and it will be lost when the MC-50 power is turned off.

○ Disk drive

The MC-50 contains a disk drive which **saves** data from the internal user area onto a floppy disk, or **loads** data from a floppy disk into the internal user area. By saving your performances onto floppy disks, you can build up a library of songs.

System programs and internal memory

When the power is first turned on, a computer is not able to do anything useful. It needs a program to tell it what useful actions to perform. This means that by loading a different program, you can make the same computer perform a wide variety of tasks. The program (software) that makes a computer run is often referred to as the **system**. Previous models of the MC series (MC - 300/500/500mk II) were just like a computer in that they needed to load a system program from disk into internal memory to tell them to "function as a sequencer". This type of device (hardware) has the advantage of being able to use a variety of different system programs, but has the disadvantage that a bit of time is required to load the system program before the machine is able to do anything useful. The MC - 50, however, has a sequencer system program (and also a performance system) in its system area, and is able to function as a sequencer almost immediately (about 3 seconds) after the power is turned on (with the initial settings).

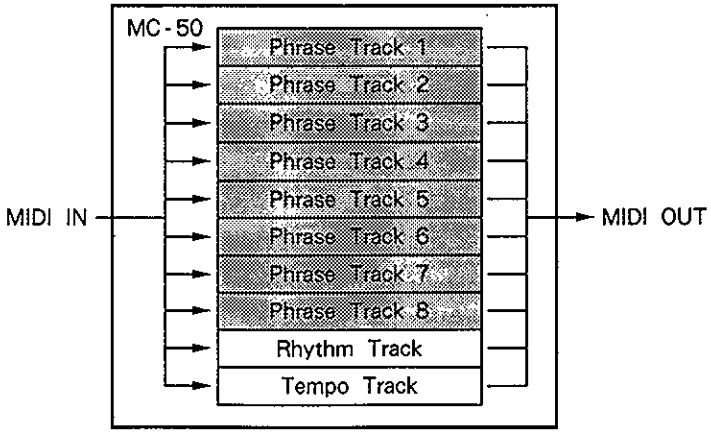
When the power is turned on, the MC - 50 checks whether or not a system disk is inserted in the disk drive (for 1 second). If not, it reads the sequencer system program from internal memory, and begins functioning as a "sequencer". If a floppy disk containing a system program is inserted when the power is turned on, the MC - 50 will read that program, and start up the system from floppy disk. This means that, like previous models of the MC - series, the MC - 50 can be used in ways other than as a sequencer. Disks containing this type of system program are known as **system disks**. By loading system disks such as the MRB - 500 **Bulk Librarian**, you can make the MC - 50 perform a wide variety of functions.

Bulk Librarian:

This refers to a program that lets you store synthesizer sound data etc. on floppy disks.

About tracks

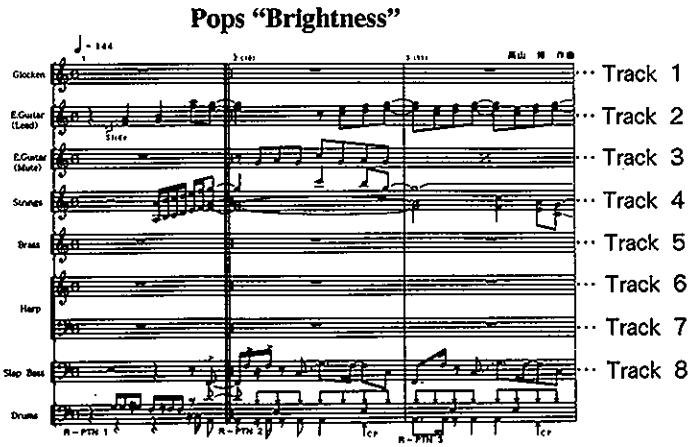
The MC - 50 has eight **Phrase Tracks**, one **Rhythm Track**, and one **Tempo Track**, for a total of ten tracks. Tracks contain musical data for MIDI instruments, not sound.



Each track can contain the following data.

○ Phrase Track

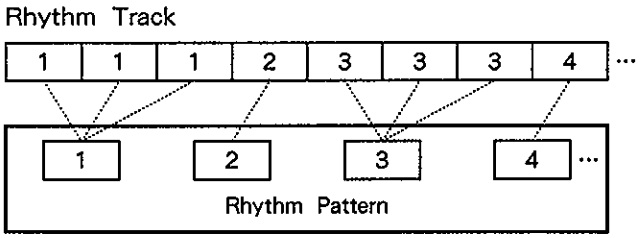
These tracks store data for a musical performance, and contain data that specifies the pitch, timing, and loudness of each note played for each instrument. There are eight of these Phrase Tracks, and when recording an ensemble - type composition, it is convenient to divide the instrumental parts into groups, and record each group on its own track.



This does not mean that the MC - 50 can record only eight parts. Once you finish recording a track, you can combine the musical data of two or more Phrase Tracks into a single Phrase Track, or record additional parts into a single track. A single Phrase Track can contain up to 16 independent musical parts, so the eight tracks of the MC - 50 actually allow you to record very large compositions of 128 parts (16 parts × 8 tracks).

○ Rhythm Track

Since the rhythm parts of a song consist mainly of repeated patterns in various combinations, the MC - 50 allows you arrange previously created **Rhythm Patterns** in the **Rhythm Track** in the order of playback. (Rhythm Patterns are created for each measure.)



The musical data recorded in the MC - 50 is played back according to the time signature of the Rhythm Patterns arranged in the Rhythm Track, and the number of Rhythm Patterns in the Rhythm Track determines the length of the song. In this way, the Rhythm Track does not simply play the percussion instruments, but is a very important track that acts as the framework for the entire song by determining the time signature and song length.

As the name suggests, the Rhythm Track contains musical data for instruments such drums and percussion. In general, percussion instruments such as drums and cymbals are played only at a specific pitch, and cannot play melodies by themselves. The Rhythm Track contains data telling which instrument was played when and how strongly.

＊The Rhythm Track is not able to handle data indicating the pitch of a note. This means that data for melodic percussion instruments such as steel drums must be recorded in a Phrase Track.

○ Tempo Track

This track records changes in tempo. It does not contain data to be sent to MIDI instruments.

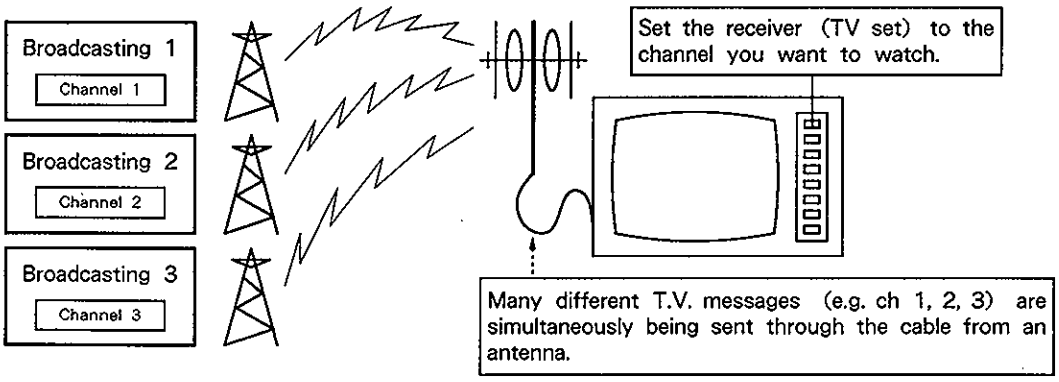
About Songs

An entire set of data recorded in these ten tracks is called a **Song**. The MC - 50 is able to store up to eight songs in its internal memory, but if the songs are long, or if they contain a lot of performance information, fewer than eight songs can be accommodated. Each song can be given a **title** (name), and saved to disk. Songs saved to disk are called **Song files**, and a single disk can store up to 108 of these Song files.

MIDI channels

By transmitting various types of message to the connected MIDI instruments, the MC - 50 is able to control an entire ensemble by using **MIDI channels**.

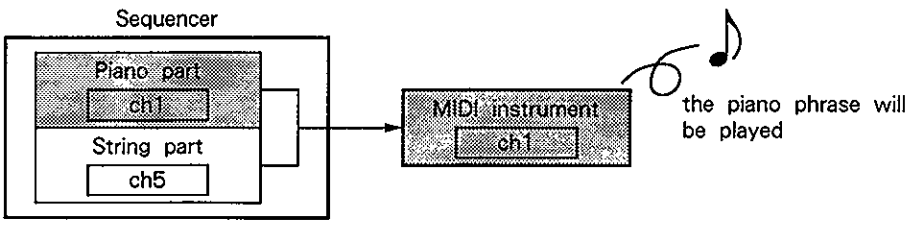
MIDI channels are similar to TV channels. Each broadcast station transmits on its own channel. The TV antenna receives the signals from many broadcast stations at once, but the TV receiver receives only the signal of the channel to which it is set, allowing you to watch the broadcast of one station at a time.


Broadcasting 1
Channel 1
Broadcasting 2
Channel 2
Broadcasting 3
Channel 3
Set the receiver (TV set) to the channel you want to watch.
Many different T.V. messages (e.g. ch 1, 2, 3) are simultaneously being sent through the cable from an antenna.

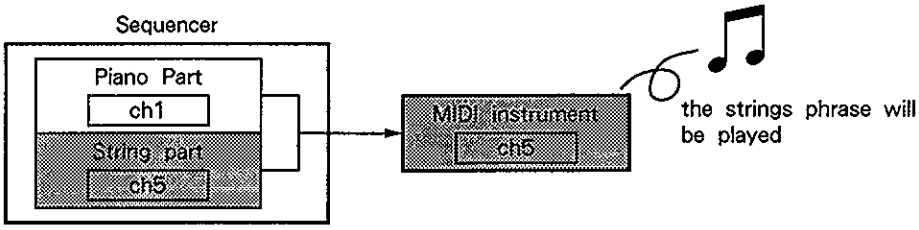
In the same way, MIDI devices use a Transmit Channel and a Receive Channel. Musical messages are received only when both channels match.

For example, suppose that a MIDI instrument is connected to the sequencer, and that the sequencer is transmitting musical data for the piano part on channel 1, and musical data for the string part on channel 5. At this time, if the receiving device is switched to Receive Channel 1, it will play the notes of the piano part. If switched to Receive Channel 5, will play the notes of the string part.

When the Receive Channel is set to 1 :

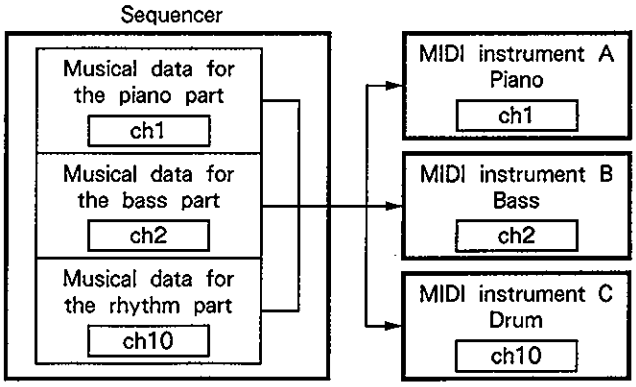


When the Receive Channel is set to 5 :



*A single MIDI cable can carry 16 independent channels of MIDI data.

In this way, a sequencer is able to transmit the musical data of each part on a different MIDI channel, to make each MIDI instrument play its own part. You must make sure that the Transmit Channel of each part matches the Receive Channel of the corresponding MIDI instrument.



MIDI Transmit/Receive channels can be set over a range of 1—16. By using all sixteen channels, you can independently control sixteen different MIDI instruments from a single sequencer.

*The MC-50 has two independent MIDI OUT connectors, and you making appropriate MIDI OUT assignments, you can independently control up to 32 different MIDI instruments.

MIDI output assign

The MC-50 has two independent MIDI OUT connectors. Since you can specify the MIDI OUT used by each track, you can independently control up to 32 MIDI instruments. The MIDI OUT used by each track is determined by the Output Assign setting (☞ see II /page 74).

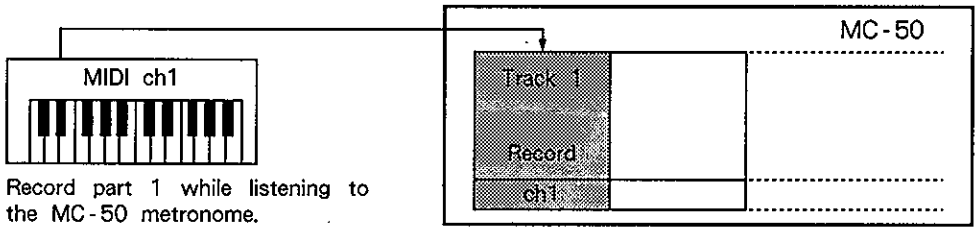
《Example of Output Assign settings》

Part 1 (ch.1/OUT 1)·····MIDI device A (ch.1)
: :
Part 16 (ch.16/OUT 1) ·····MIDI device B (ch.16)
Part 17(ch.1/OUT 2)·····MIDI device C (ch.1)
: :
Part 32(ch.16/OUT 2) ·····MIDI device D (ch.16)

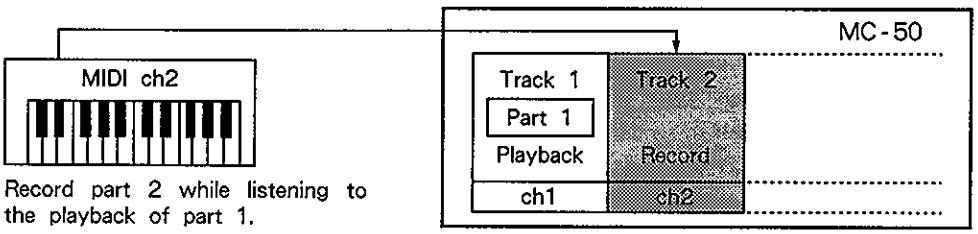
*In this example, part 1 is transmitting on channel 1 from MIDI OUT 1, and will therefore control MIDI device A, which is receiving channel 1 from MIDI OUT 1. MIDI device C is also receiving channel 1, but is connected to OUT 2, and will not receive the messages transmitted by part 1.

■ Sequencers and MTRs (multitrack recorders)

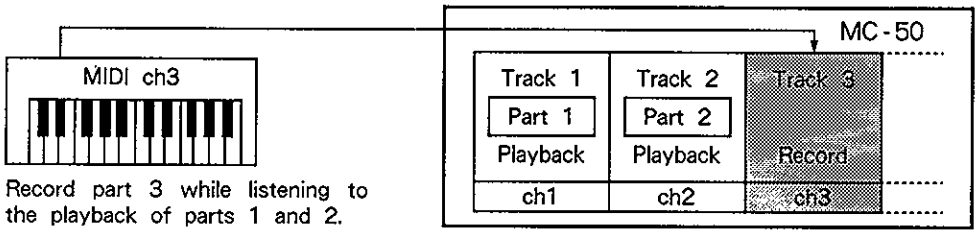
Multitrack sequencers such as the MC - 50 allow you to do **multitrack recording**. This allows you to build up a complex composition by recording one track at a time while listening to the playback of the previously recorded tracks.



Record part 1 while listening to the MC-50 metronome.



Record part 2 while listening to the playback of part 1.



Record part 3 while listening to the playback of parts 1 and 2.

In this way by playing just one part at a time, you can build up a multitrack orchestral composition. Although the same type of process is possible with multitrack tape recorders, using a sequencer offers the following advantages.

○Since the performance is recorded in digital form,

there is no loss in sound quality no matter how many times the data is layered.
there is no crosstalk (leakage of sound onto another track).
you can instantly move to the beginning of the song, or rewind and fast forward.
you can store the performance data on a small, convenient disk.

○Since not the sound, but the musical data is being recorded,

the tempo can be changed without affecting the pitch.
the pitch can be changed without affecting the tempo (the transpose function).
by changing the settings of your MIDI instruments, you can change the sounds used for playback.
note timing can be corrected automatically (the quantize function).
sections (or all) of the data can be copied or deleted (copy/delete functions).

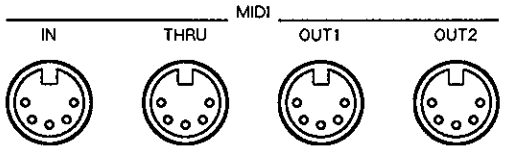
Some disadvantages of sequencers are that since the sound itself is not being recorded, it is not possible to record vocals or acoustic instruments.
The important thing is to use each technology for what it is best at. Use multitrack tape recorders to do what sequencers cannot (or vice versa), and your musical creations will have more depth. The MC - 50 is able to synchronize itself to a multitrack tape recorder to record and playback MIDI instruments in **synchronization** with the sounds played back by the tape recorder (☞ II /P.23). This technique is widely used in recording studios today. A multitrack tape recorder is an excellent partner for a MIDI sequencer.

[2] CONNECTIONS

By using a MIDI cable to connect the MC - 50 with a MIDI device, the MC - 50 can control (or be controlled by) the external MIDI device.

■ The MIDI connectors of the MC - 50

The rear panel of the MC - 50 has three types of MIDI connector; IN, OUT, and THRU. (There are two MIDI OUTs.) Nearly any device that has a MIDI connector can be connected to the MC - 50. Audio devices and some rhythm machines may have "5 - pin DIN" connectors which have the same shape, but carry completely different electrical signals. Not only will the MC - 50 not work when connected to such a device, but it may even malfunction. Never connect the MC - 50's MIDI connectors to such a device.



MIDI OUT 2
This connector transmits musical messages to another MIDI device. With the initial settings, the Soft Thru function will be on (☞ see I／page 25).

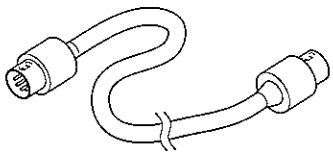
MIDI OUT 1
This connector transmits musical messages to another MIDI device. With the initial settings, the Soft Thru function will be off (☞ see I／page 25).

MIDI THRU
This connector re - transmits the messages received at MIDI IN.

MIDI IN
This connector receives musical messages from another MIDI device.

Note!

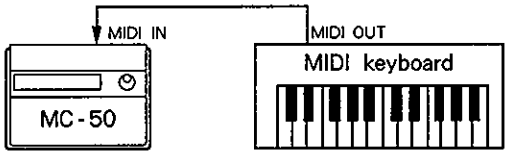
Use MIDI cables such as the following to connect MIDI devices. There are other types of cable which use the same "5 - pin DIN" connector, but cannot be used for MIDI. Be sure to use cables designed for MIDI.



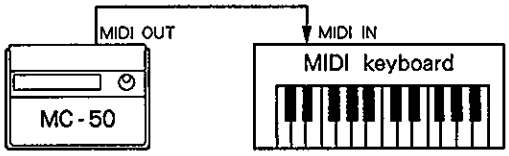
■Basic MIDI connections

Use a MIDI cable to connect the MIDI OUT of the transmitting device to the MIDI IN of the receiving device. This means that if you wish to record a performance from a MIDI keyboard on the MC - 50, connect the MIDI OUT of the keyboard to the MIDI IN of the MC - 50. If you wish to playback the MC - 50 to play a MIDI keyboard, connect the MIDI OUT of the MC - 50 (either of the two MIDI OUTs) to the MIDI IN of the keyboard.

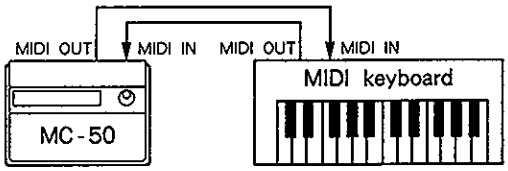
During recording



During playback

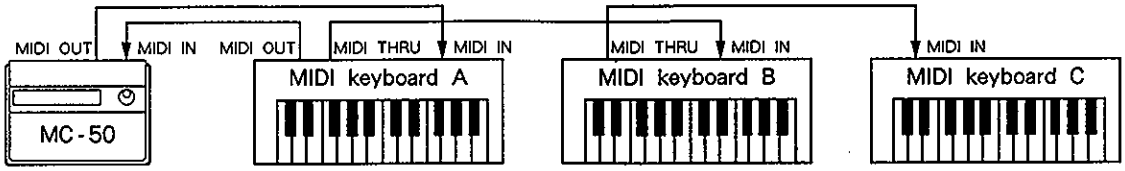


MIDI messages travel one way. If you wish to record and playback without remaking connections, connect the MIDI INs and OUTs of the two devices as follows.

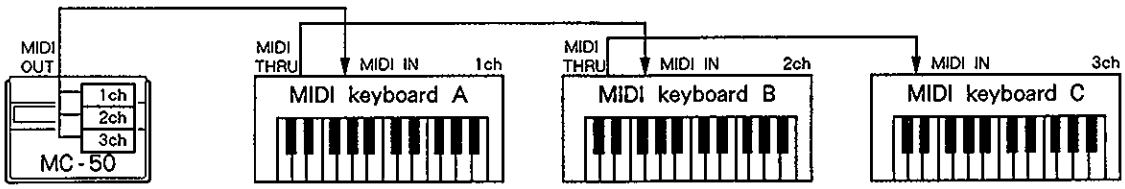


＊The MIDI OUT to use will depend on the settings of your MIDI keyboard (☞ see I /page 25).

If you are connecting two or more devices, use the THRU connectors.



Simply connecting a MIDI device does not guarantee that the musical messages will be received correctly. You must make sure that the MIDI Receive Channel of the sound module you wish to play is set to the same channel as the recorded data.



■MIDI devices that can be connected

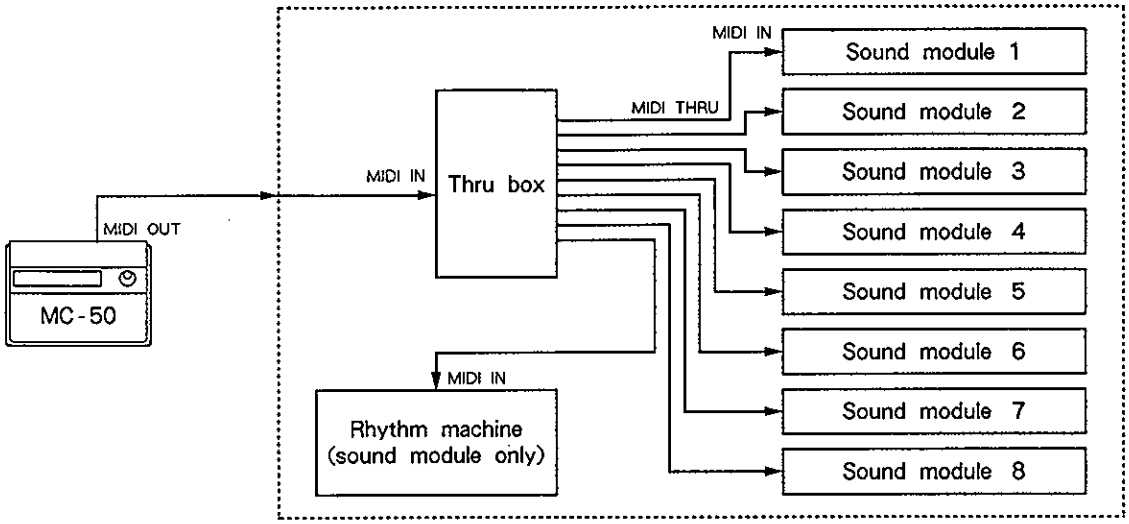
The following devices can be connected to the MC - 50 to create various types of system. Many other combinations are also possible.

○MIDI keyboard

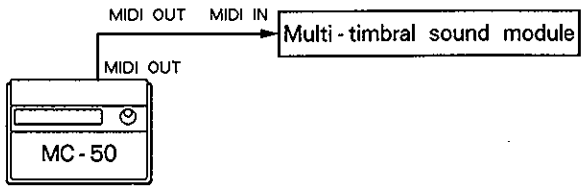
Electronic musical instruments with a keyboard, such as electronic pianos or synthesizers. Some models are **multi - timbral** and some are not.

○Sound modules

Sound modules (MT - 32, CM - 64, U - 220, etc., sold separately) contain only the sound - generating circuitry of an electronic piano or synthesizer, without a keyboard. Since they have no keyboard, they cannot produce sound by themselves. The real advantage of sound modules becomes apparent when they are used together with a sequencer. When creating an ensemble composition, connect as many sound modules as you need to play each part. Some sound modules are "multi - timbral", meaning that they can function as two or more independent sound modules in a single unit.



A multi - timbral sound module can perform all the functions surrounded by the dashed line.



Multi - timbral sound modules/multi - timbral keyboards:

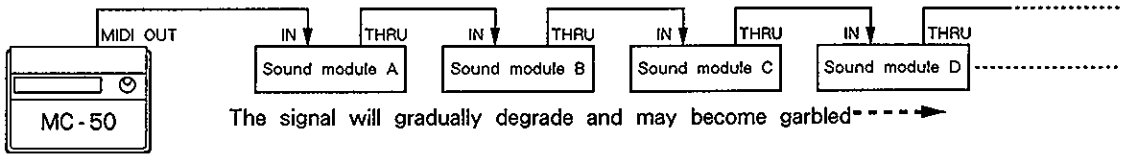
Multi - timbral sound modules can function as two or more sound modules in a single unit. Some, such as the MT - 32 (sold separately), also contain rhythm sounds and effect units. When using the MC - 50 with a synthesizer or electric piano, adding just one of these multi - timbral sound modules allows you to record and playback multi - part orchestral compositions. Recently, multi - timbral keyboards (D - 5, U - 20, Model - 660, etc., sold separately) have begun to appear, making sequencer music even easier than ever.

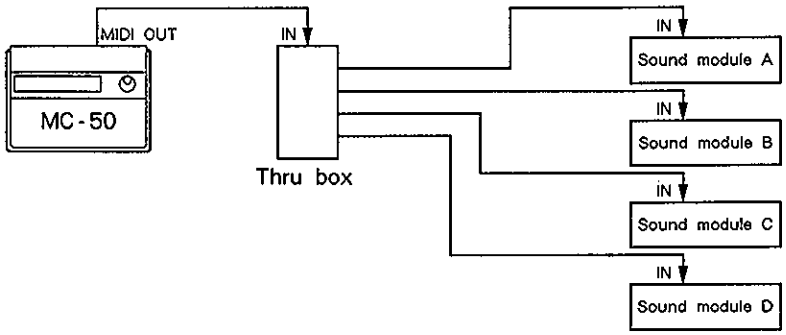
○ MIDI controllers

MIDI controller is the term used to refer to devices such as keyboard controllers (A - 50/80, sold separately), guitar controllers, and pad controllers (PAD - 80, sold separately). These devices contain only the control section of a MIDI instrument, such as the keyboard or pads, and do not contain sound producing circuitry. (When used together with a MIDI sound module, these will function as a MIDI instrument.) MIDI controllers can be used to input musical data into a sequencer in the same way as MIDI keyboards.

○ MIDI Thru boxes

Thru boxes (A - 880, etc., sold separately) are used to distribute MIDI messages, and are useful when you are connecting many MIDI instruments or sound modules. If you "daisy - chain" more than three devices by connecting MIDI cables from IN → THRU → IN → THRU, the MIDI signal will begin to degrade and may not be transmitted accurately, causing reception errors.





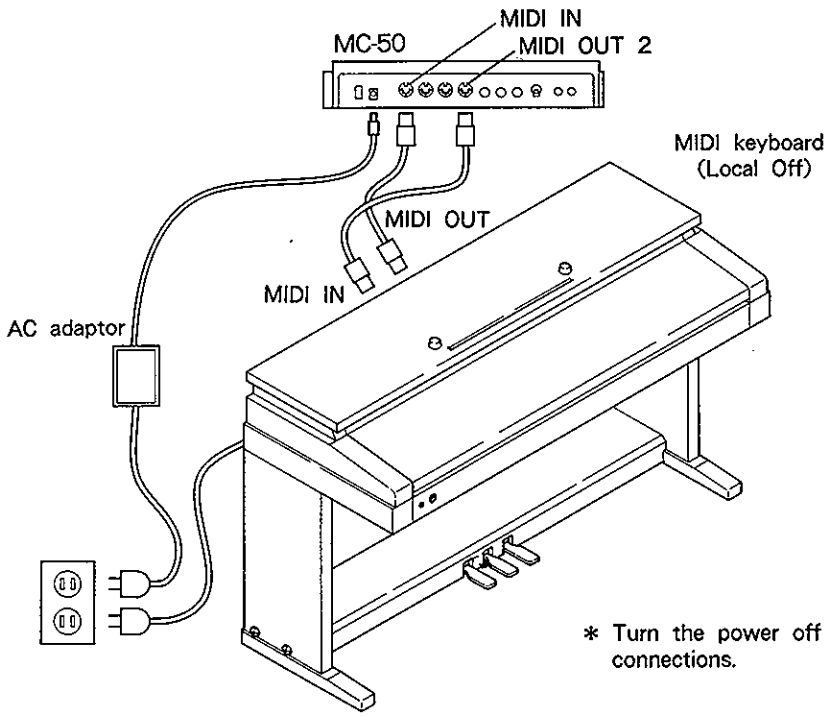
○ MIDI - equipped effect devices

If a MIDI - equipped effect device is connected to the MC - 50, you can switch effect settings by transmitting Program Change messages from the MC - 50 to the effect device.

■Connecting a MIDI keyboard (electronic piano or synthesizer)

The simplest way to use the MC - 50 is to connect an electronic piano or synthesizer. With this type of setup, you will be able to play only one part. By connecting a multi - timbral keyboard, you can take greater advantage of the MC - 50's multitrack recording capabilities.

《Connections》



①Connect the AC adaptor to the MC - 50 rear panel connector marked "DC IN 9V".
②Insert the AC adaptor plug into an AC outlet.
③Use a MIDI cable to connect the MIDI OUT of the keyboard to the MIDI IN of the MC - 50.
④If your keyboard has a Local Off (☞ see I /page 25) setting, connect the MIDI OUT 2 (Soft Thru On) of the MC - 50 to the MIDI IN of your keyboard. If your keyboard does not have a Local Off setting, use the MIDI OUT 1 (Soft Thru Off) of the MC - 50 (☞ see I /page 25).

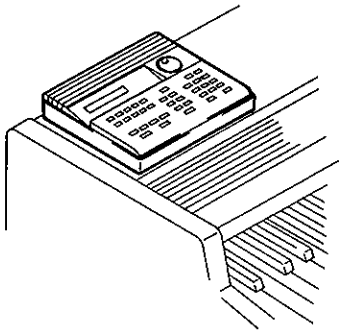
* Refer to the manual of your keyboard for details on Local On/Off settings.

In addition to the above connections, you will need to connect an amp/speaker system to hear your synthesizer (unless your instrument has a built - in speaker). You may use a radio cassette player, or headphones if you wish.

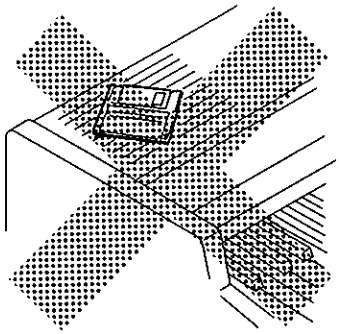
MC-50 settings

The MC-50 contains a floppy disk drive, which may not operate correctly if placed at an angle. Place the MC-50 on a steady and level surface.

If the top of your electronic piano is flat, you can place the MC-50 there, but if it is placed at the left, the music stand may get in the way when you need to insert disks. If so, place it on the right side, or remove the music stand.



If your keyboard has speakers built into the top, they may be obstructed by the MC-50, and not sound correctly. In addition, the data in a floppy disk may be damaged by the magnetic field generated by speaker magnets.

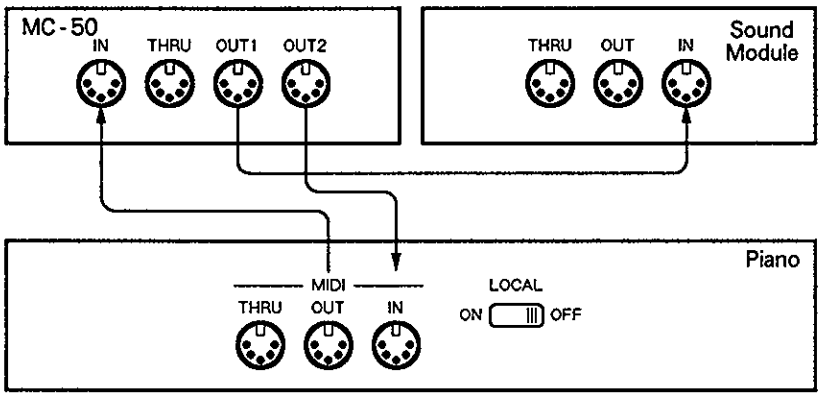


■ Connecting an electronic piano and sound module

If you add a multi - timbral sound module to a non - multi - timbral electronic piano, you can use the MC - 50 to create multi - part compositions.

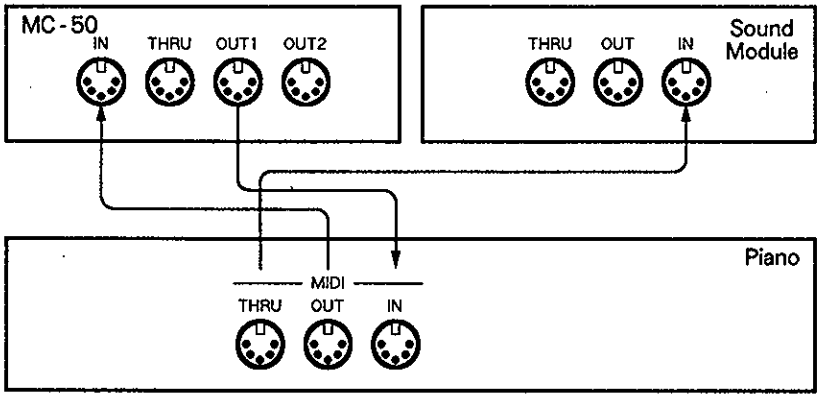
○ Pianos which can be set to Local Off

Set your piano to Local Off (for details, refer to the manual for your piano), and connect it to MIDI OUT 2 (Soft Thru On) of the MC - 50 (☞ see II /page 25).



○ Pianos which cannot be set to Local Off

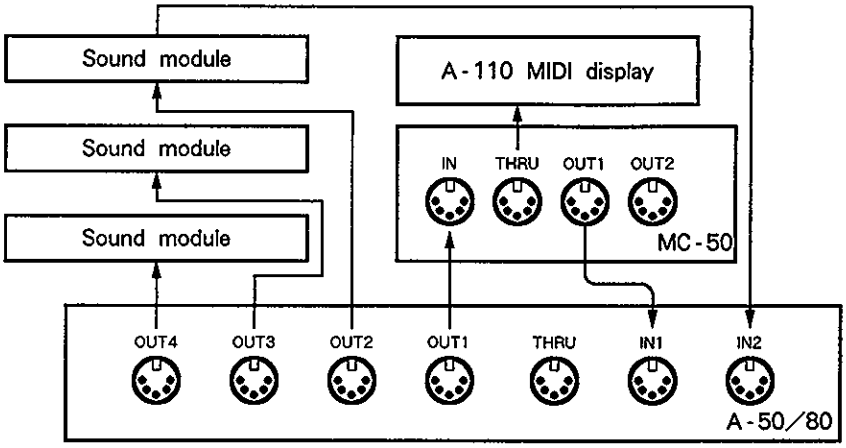
Connect your piano to MIDI OUT 1 (Soft Thru Off) of the MC - 50.



＊If your electronic piano has audio input jacks and built - in speakers, you can listen to the sound of the connected sound module through the piano's speakers.

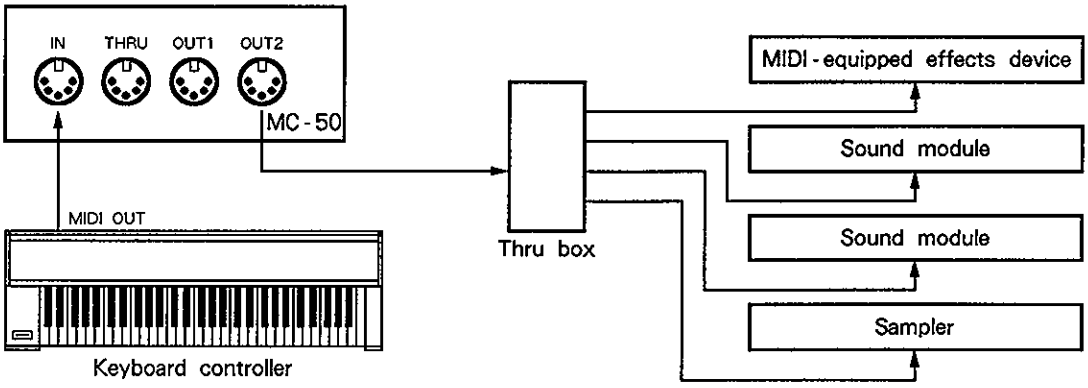
■Example connections using a keyboard controller

Example of connections with an A-50/80



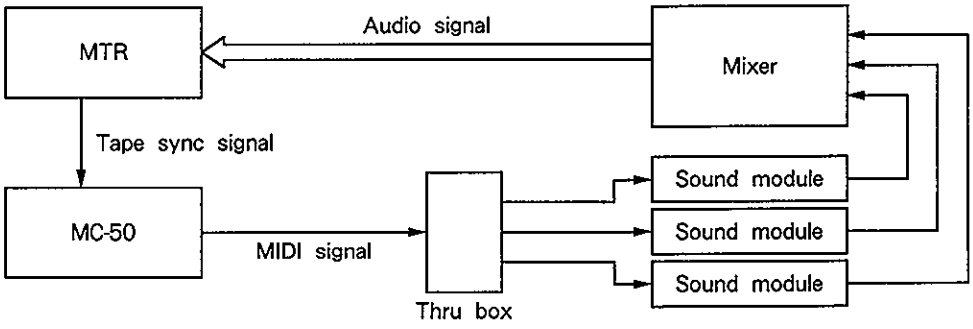
* The MIDI IN 1 of the A-50/80 is Soft Thru On

Example of connections with a standard keyboard



■Example connections for a synchronized recording system

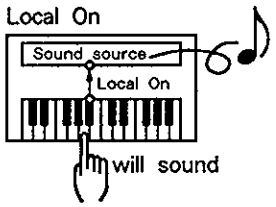
Since a sequencer is a device which records the musical performance data (not the sound) of an electronic instrument, it cannot record actual sounds themselves, such as can be picked up by a microphone. If you wish to record acoustic instruments or vocals together with the sounds of electronic instruments, you will need to synchronize a MTR (multitrack tape recorder) with the MC - 50 as it controls the electronic instruments. Once the sync signal from the MC - 50 has been recorded on an unused track of the tape, the MC - 50 will be able to record and playback in synchronization with the tape sync signal.

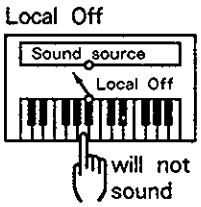


*The tape sync found on older sequencers was able to synchronize only from the beginning of the song. The tape sync of the MC - 50 is able to synchronize from any point in the song (☞ See II /page 23).

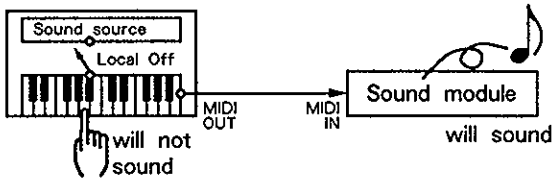
Local on/off function and the Soft Thru on/off function

Most (but not all) MIDI keyboards have a Local On/Off setting. When this is turned off, the keyboard section will be separated from the sound generating circuitry, and playing the keyboard will not produce sound. However, messages will be transmitted from MIDI OUT when the keyboard is played.

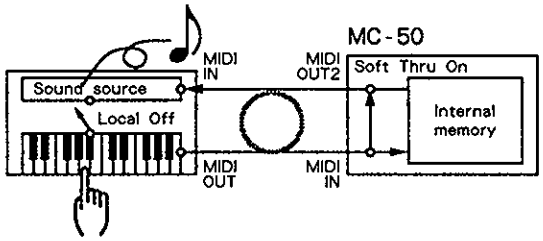




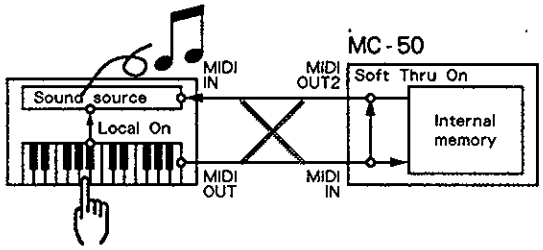
Local Off is convenient when you wish to play only the connected MIDI sound modules without hearing the sound of the instrument itself.



Sequencers such as the MC-50 have a Soft Thru function. When Soft Thru is turned on, musical messages received at MIDI IN are re-transmitted from MIDI OUT as they are recorded. This means that as you record, you can hear how the MIDI sound modules connected to the sequencer's MIDI OUT will sound during playback.

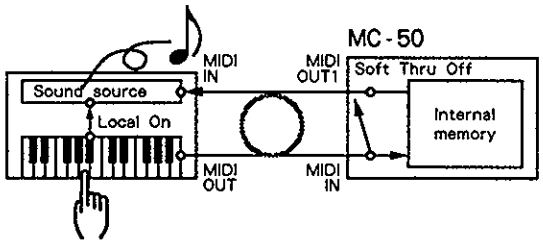


Here's what happens when a MIDI keyboard is connected to a sequencer which is recording with its Soft Thru turned On.
If the MIDI keyboard is set to Local On, each note played on the keyboard will be sounded both directly from the keyboard, and by the message that passed through the sequencer back into the keyboard. This will make each note be sounded twice, or perhaps cut off unnaturally.



On the other hand if the MIDI keyboard is set to Local Off, the note messages from the keyboard will pass through the sequencer and play the sound generator built into the keyboard.

In this way, when using a sequencer you will normally set it to Soft Thru On, and set the connected keyboard to Local Off. The MC-50 is initially set so that MIDI OUT 2 is Soft Thru On, so simply connect this connector to the MIDI IN of your MIDI keyboard.



If your keyboard is set to Local off or does not have a Local On/Off function, connect it to the MIDI OUT 1 (Soft Thru Off) of the MC-50.

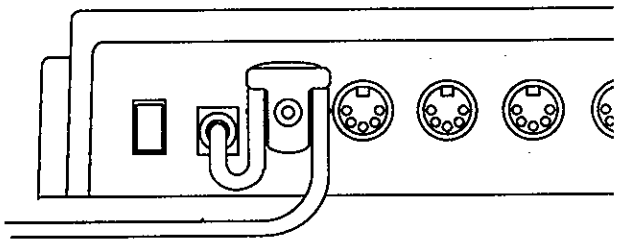
The following chart shows the ways in which the Local On/Off setting of your MIDI keyboard and the Soft Thru On/Off setting of the MC-50 can be combined.

MIDI keyboard	MC-50 THRU ON (MIDI OUT 2)	MC-50 THRU OFF (MIDI OUT 1)
Local Off	○	×
Local On	×	○

*Other combinations may result in no sound, or in notes being sounded incorrectly.

Cable hook

By wrapping the AC adapter cable around the cable hook, you can prevent the cable from accidentally being pulled out and cutting off the power.



③TURN THE POWER ON

1. Turning the Power ON

■Starting SUPER - MRC

① Before you turn the power on, make sure of the following.

- that the MC - 50 is correctly connected to the other devices
- that there is no disk in the disk drive
- that the volumes of the mixer/amp system are turned down

② Turn the power of each device on in the following order.

MIDI instruments → Audio device → MC - 50

Turning the power on in the wrong order will not damage the MC - 50. However when the MC - 50 is turned on, it may transmit various initialization messages to the other devices, and if the MIDI instruments are not yet turned on, they will not receive these messages.

When you turn on the MC - 50, the initial display will immediately appear, and after a short time (about 3 seconds), the following display will appear.

Initial display

```
MC-50 SUPER-MRC
Recording System
```

after a short time →

Standby display

```
SONG  1
M=    1   ♩=120   REAL
```

This is the **Standby display**, and this condition is called the **Standby Condition**. Recording and playback procedures begin from this display.

■Starting SUPER - MRP

From the condition of ②, hold the MC - 50's numeric key [2] and turn the power on, and SUPER - MRP (☞ see II /page 167) will be started up.

■Starting from a system disk

Turn the power on, and while the initial display is still showing, insert the floppy disk containing the system program you wish to load. The system program will be loaded from disk.

＊If you hold down numeric key [3] while turning the power on, then press [ENTER] and insert a floppy disk, you can start up a system from disk.

2. Turning the Power OFF

① Before you turn the MC - 50 power off, make sure of the following.

- there is no disk in the disk drive
- data you wish to keep has been saved to disk (☞ see I /page 41)

② Turn the power off in the following order.

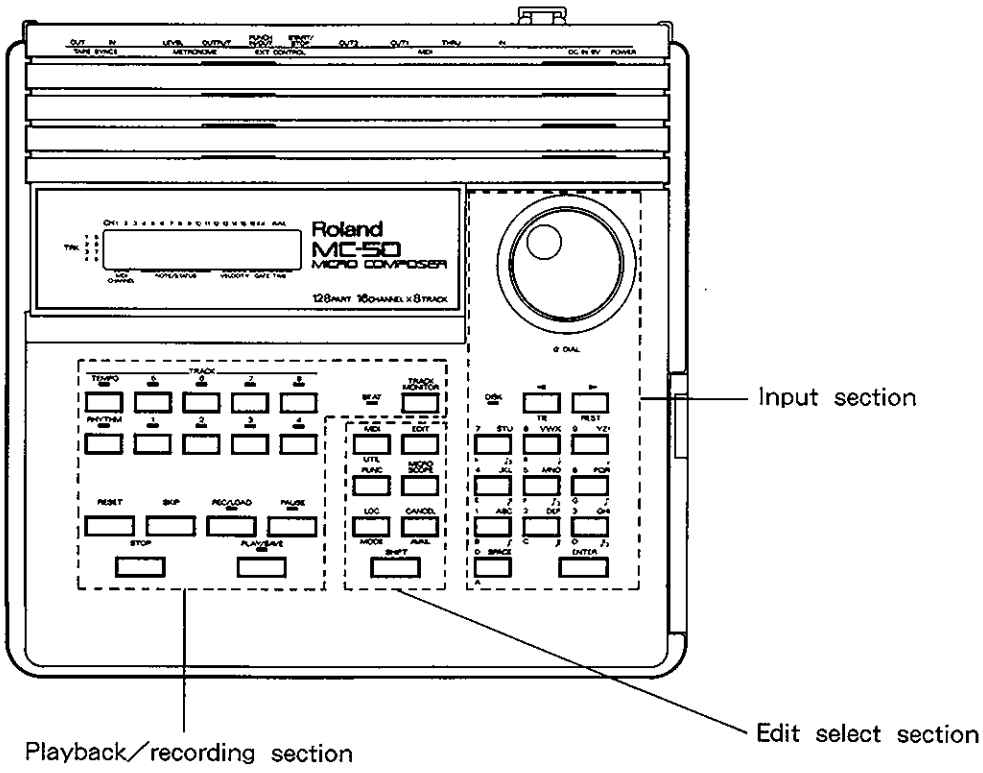
MC - 50 → Audio devices → MIDI devices

*If you turn off the MIDI devices while the volumes are still raised and the audio system still turned on, the speakers may be damaged.

④HARDWARE

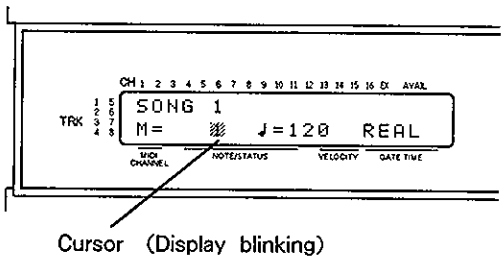
Panel keys and rear panel connectors will be explained separately for each SUPER - MRC function. As you read through this section, press each key and notice what happens.

Keys on the MC - 50 front panel are arranged in groups by function.



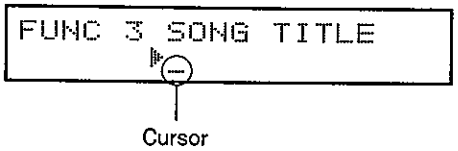
■The display

Gives you information as you make settings and perform operations. The display is tilted, for easy visibility when the MC - 50 is placed on a table or electronic piano, and is backlit for readability even on dark stages.



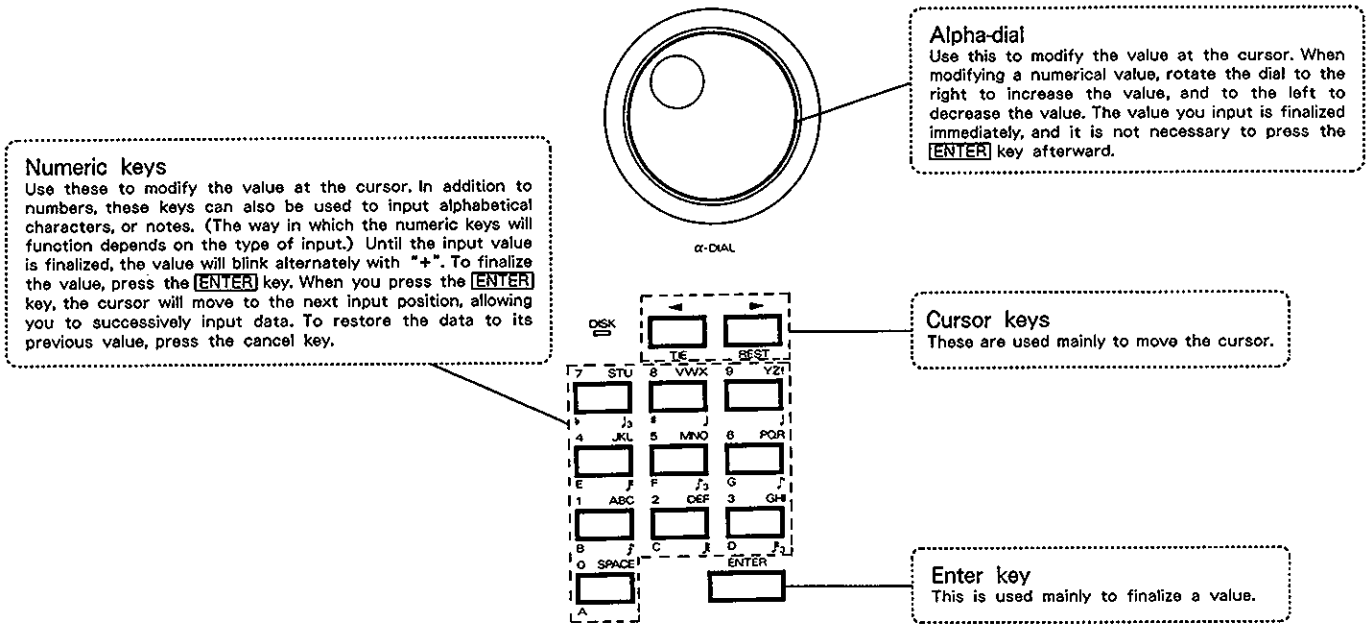
In general, the area of the display where the characters or numerals are blinking is called the **cursor**, and indicates the place where you can input data. To modify the settings and data of the MC - 50, move the cursor to the parameter (data value) you wish to input, and modify the data value.

＊In some displays, the cursor is shown as a line underneath the input value.



《Input section》

Use the numeric keys and Alpha-dial to input data at the cursor location. Use the two cursor keys to move the cursor.

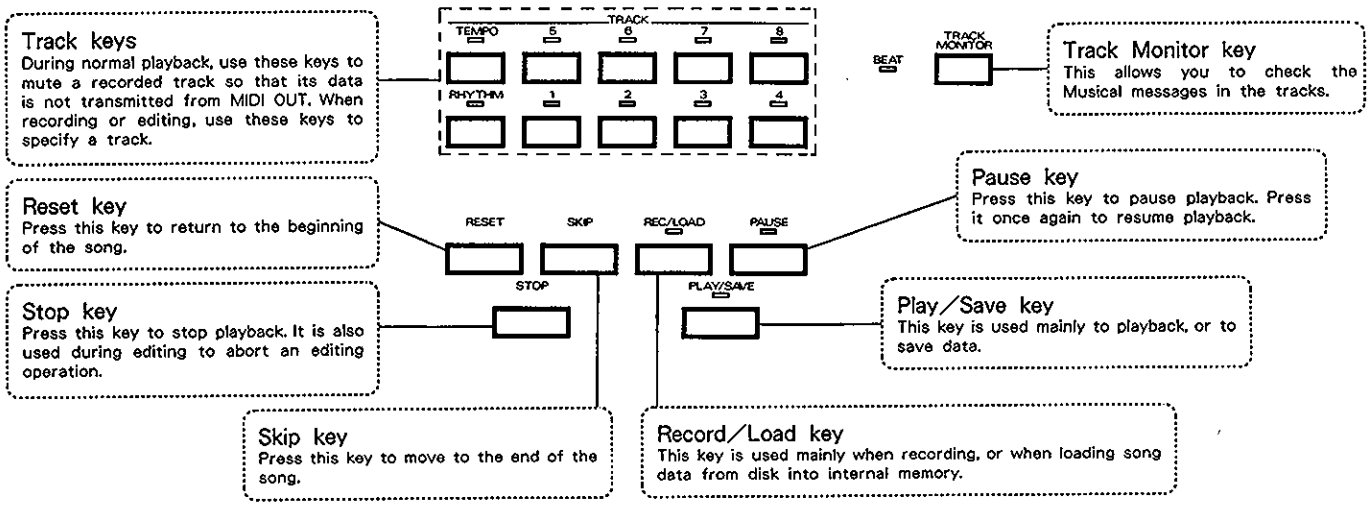

Alpha-dial
Use this to modify the value at the cursor. When modifying a numerical value, rotate the dial to the right to increase the value, and to the left to decrease the value. The value you input is finalized immediately, and it is not necessary to press the ENTER key afterward.
Numeric keys
Use these to modify the value at the cursor. In addition to numbers, these keys can also be used to input alphabetical characters, or notes. (The way in which the numeric keys will function depends on the type of input.) Until the input value is finalized, the value will blink alternately with "+". To finalize the value, press the ENTER key. When you press the ENTER key, the cursor will move to the next input position, allowing you to successively input data. To restore the data to its previous value, press the cancel key.
α-DIAL
DISK
TIME
BEAT
Cursor keys
These are used mainly to move the cursor.
Enter key
This is used mainly to finalize a value.
ENTER
SPACE

Important!

There are two ways to modify a setting value; use the Alpha-dial to modify the value, or use the numeric keys to input a new value and press ENTER. Either method will have the same results. Use the method that is most convenient for you.

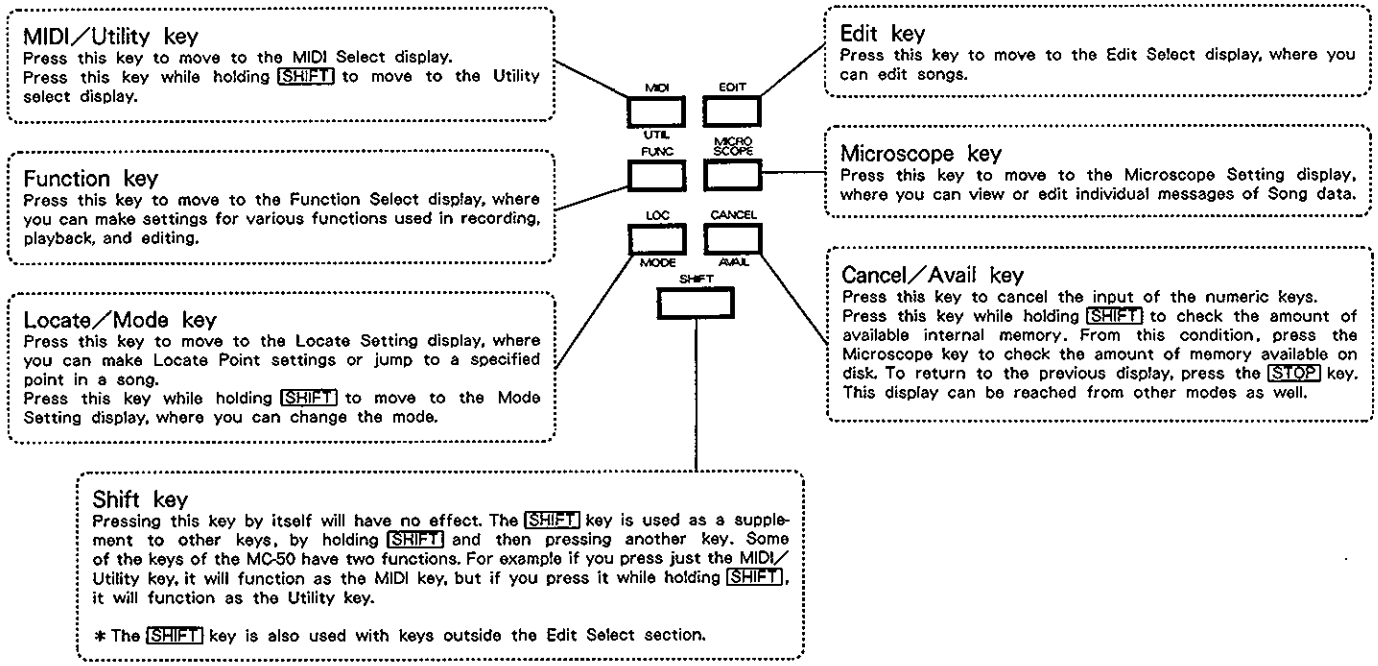
《Playback/recording section》

This section contains the keys used in mode 1 when recording tracks to build up a song, or when playing back a song.


Track keys
During normal playback, use these keys to mute a recorded track so that its data is not transmitted from MIDI OUT. When recording or editing, use these keys to specify a track.
TRACK
TEMPO
RHYTHM
BEAT
TRACK MONITOR
Track Monitor key
This allows you to check the Musical messages in the tracks.
Reset key
Press this key to return to the beginning of the song.
RESET
SKIP
REC/LOAD
PAUSE
Pause key
Press this key to pause playback. Press it once again to resume playback.
Stop key
Press this key to stop playback. It is also used during editing to abort an editing operation.
STOP
PLAY/SAVE
Play/Save key
This key is used mainly to playback, or to save data.
Skip key
Press this key to move to the end of the song.
Record/Load key
This key is used mainly when recording, or when loading song data from disk into internal memory.

《Edit select section》

The keys in this section are used mainly in mode 1, "MIDI RECORDER". From the mode 1 standby condition, press one of these keys to move to the desired editing display. To return to the standby display, press the [STOP] key of the Playback/recording section.


MIDI/Utility key
Press this key to move to the MIDI Select display.
Press this key while holding [SHIFT] to move to the Utility select display.
Function key
Press this key to move to the Function Select display, where you can make settings for various functions used in recording, playback, and editing.
Locate/Mode key
Press this key to move to the Locate Setting display, where you can make Locate Point settings or jump to a specified point in a song.
Press this key while holding [SHIFT] to move to the Mode Setting display, where you can change the mode.
MIDI
EDIT
UTIL
FUNC
MICRO SCOPE
LOC
CANCEL
MODE
AVAIL
SHIFT
Edit key
Press this key to move to the Edit Select display, where you can edit songs.
Microscope key
Press this key to move to the Microscope Setting display, where you can view or edit individual messages of Song data.
Cancel/Avail key
Press this key to cancel the input of the numeric keys.
Press this key while holding [SHIFT] to check the amount of available internal memory. From this condition, press the Microscope key to check the amount of memory available on disk. To return to the previous display, press the [STOP] key.
This display can be reached from other modes as well.
Shift key
Pressing this key by itself will have no effect. The [SHIFT] key is used as a supplement to other keys, by holding [SHIFT] and then pressing another key. Some of the keys of the MC-50 have two functions. For example if you press just the MIDI/Utility key, it will function as the MIDI key, but if you press it while holding [SHIFT], it will function as the Utility key.
* The [SHIFT] key is also used with keys outside the Edit Select section.

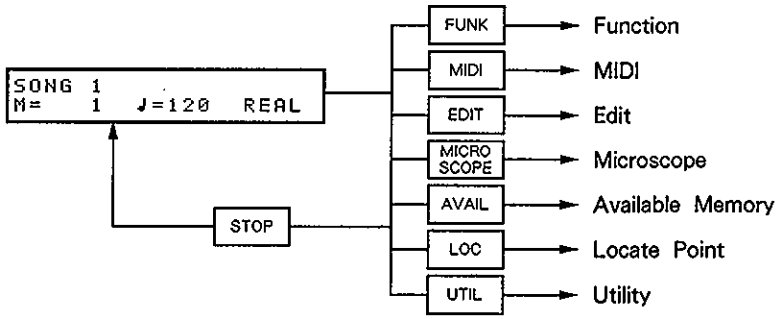
Note!

If the MC-50 stops responding, or if you are not able to move from a certain display to another display, press the [STOP] key, or hold [SHIFT] and press the [MODE] (/Locate Point) key. If the MC-50 still does not respond, turn the power off, and start up SUPER-MRC once again.

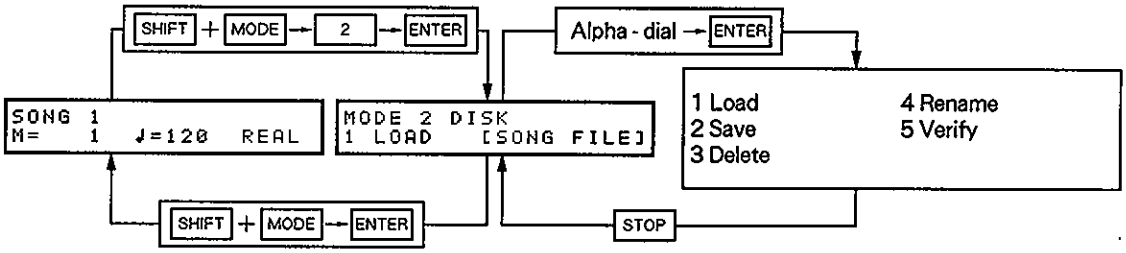
[5] MODES OF OPERATION

SUPER - MRC has the following five modes. Use the following procedure to move from the standby display to the various mode displays.

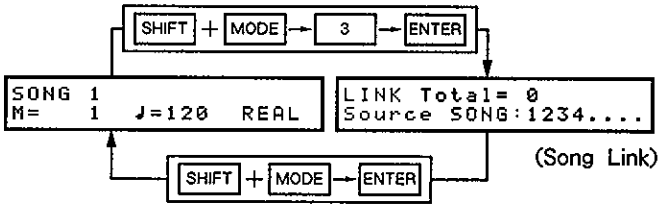
Mode 1 (MIDI RECORDER) Use the MC - 50 as a MIDI recorder (☞ see II /page 13).



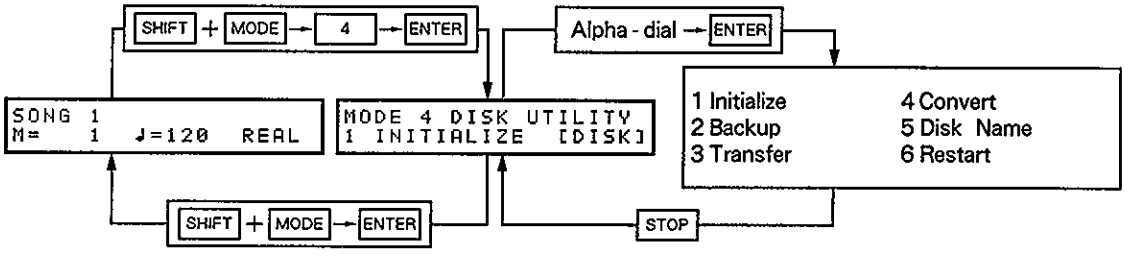
Mode 2 (DISK) Transfer song data between the MC - 50 and disk (☞ see II /page 135).



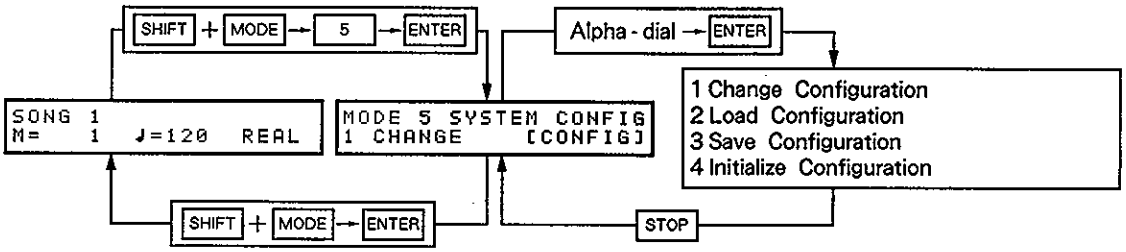
Mode 3 (SONG LINK) Link two or more songs in internal memory into a single song (☞ see II /page 143).



Mode 4 (DISK UTILITY) Manage disk data (☞ see II /page 147).



Mode 5 (SYSTEM CONFIG) Make system settings (☞ see II /page 155).



【How to move between displays】

The procedure for moving between displays in mode 1 is different from the other modes.

< In mode 1 >

① From the standby condition, press the key of the desired Edit Select section.

② Use the Alpha - dial or numeric keys to select the function you wish to set.

＊When you press the [STOP] key, you will return to the standby condition.

< In modes 2—5 >

① From the standby condition, hold the [SHIFT] key and press the [MODE] key.

② Use the Alpha - dial or numeric keys to select the desired display.

③ Press the [ENTER] key.

④ Use the Alpha - dial or numeric keys to select the function you wish to set.

⑤ Press the [ENTER] key.

＊When you press the [STOP] key, you will return to the function select display. When you hold the [SHIFT] key and press the [MODE] key, you will return to the mode select display.

⑥ INITIALIZING A DISK

The musical data in internal memory will be lost when you turn the power off. If you wish to keep the data you record or edit, you must save it to a floppy disk. However, a newly purchased disk or a disk that has been used by another device cannot be used as it is. It must first be **initialized** before it can be used by the MC - 50. Before you begin recording, initialize a disk to prepare it for saving MC - 50 data. A new 3.5 inch floppy disk is included with the MC - 50, so go ahead and initialize it now.

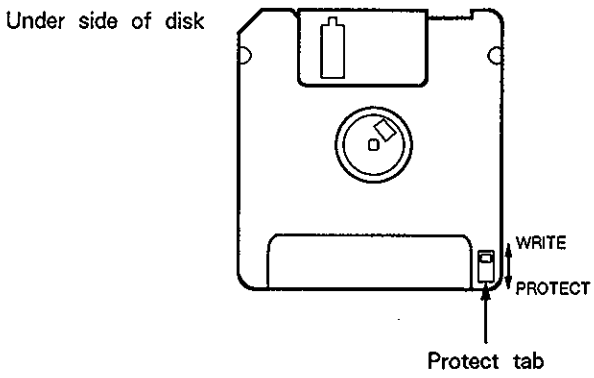
*When purchasing floppy disks, ask your dealer for **3.5 inch double side double density disks** such as the "Roland MF - 2DD". The MC - 50 is not able to use 3.5 inch double side high density disks such as the "Roland MF - 2HD".

Important!

- Newly purchased disks must be initialized before they can be used.
- When a disk is initialized, all its data will be lost.
- Disks used by another device must first be initialized by the MC - 50 before they can be used.

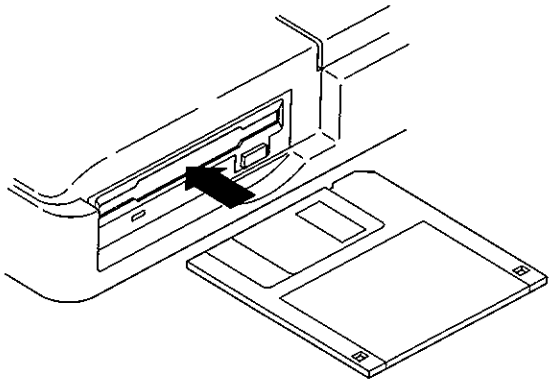
The floppy disk Protect tab

Floppy disks have a **Protect tab** which can be used to prevent data from being erased accidentally. When the Protect tab is moved towards PROTECT, the contents of the disk are protected, and it is not possible to save or rewrite data on that disk, or to initialize it. When you wish to initialize or save, set the Protect tab to the WRITE position before inserting the disk into the disk drive. When you finish saving, be sure to move the Protect tab back to the PROTECT position.

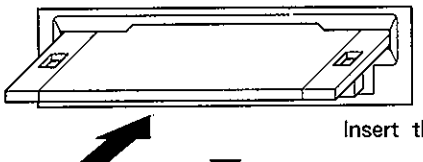


【Disk initialization procedure】

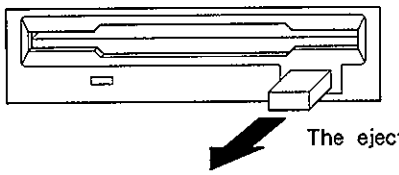
① Making sure that the Protect slider is in the WRITE position, hold the disk horizontally with the label facing up, and insert it into the **disk slot** located on the right side of the MC - 50.



When the disk has been inserted correctly, it will click into place, and the **eject button** beneath the **disk slot** will pop out.



Insert the disk



The eject button will pop out

② Hold [SHIFT] and press [MODE] to get the Mode select display.

```
MODE ▒ MIDI RECORDER
```

③ Press [4] and then [ENTER]. (Or if you wish, you can use the Alpha - dial to select 4, and then press [ENTER].)

This will select Disk Utility mode (mode 4).

```
MODE 4 DISK UTILITY
▒ INITIALIZE  [DISK]
```

④ Press [ENTER] to select the Initialize display. When you press the button, the display will ask if you are sure you want to erase the data. (This display may or may not appear, depending on the disk data.)

```
Clear DISK data?
Yes:ENTER    No:STOP
```

⑤ If you are sure you want to initialize the disk, press [ENTER]. To exit without initializing, press [STOP]. When you press [ENTER], initializing will begin, and the following display will appear.

```
Initializing        **
Please Wait.    [INIT]
```

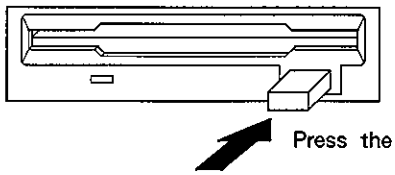
Initializing a disk will take about 1 minute.

Note!

When a disk is initialized, any data that may have been on the disk will be erased. Before initializing a disk that has been used by another device, make sure that it is ok to erase the data.

⑥ When initialization is complete, the following display will appear. When the display changes, press the eject button and remove the disk.

```
INIT Complete! Cont?
YES:ENTER     NO:STOP
```



⑦ To end the procedure, press [STOP].

If you wish to continue initializing another disk, insert the disk, press [ENTER], and repeat the procedure from step ⑤.

You now have a disk which can be used to store MC - 50 data. For details of the Save procedure, refer to page 41 of this manual.

● To return from this display to Mode 1 standby, hold [SHIFT] and press [MODE] to get the mode select display. Then press [1] → [ENTER].

7 BASIC OPERATION

1. Recording with a MIDI Keyboard and the MC-50

Let's connect a MIDI keyboard (electronic piano or synthesizer) to the MC-50 and make a simple recording. Keeping time with the metronome, play Bach's "Air on the G String" and record it in realtime. In this example, we will record the accompaniment part and the melody part separately.

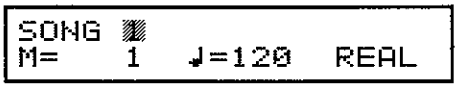
*For connections, refer to page 21.

■ Record the accompaniment

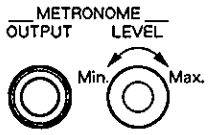
First, record the accompaniment on track 1.

● From the standby condition

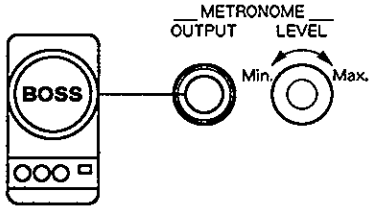
① Select the song number of the song you wish to record.
Move the cursor to the right of "SONG", and use [SHIFT] + Alpha-dial to select the song number. (It is not possible to select a number greater than 8.)



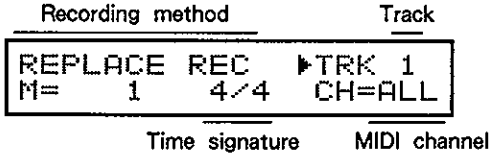
② Press [REC]. The REC indicator and the indicator of track 1 will begin blinking. And the metronome will begin to sound.
If the volume is too low (or high), rotate the metronome volume knob located on the back panel to the right (or left).



*Changing the volume of the metronome will also change the volume of the MC-50's warning signal.
*If the metronome volume is too low, you can connect a monitor amp or headphones to the Metronome output jack to hear the metronome at a higher volume. The metronome output volume knob also affects this output level.



③ Press [REC] once again, and the recording settings display will appear.



④ Set the recording parameters as necessary.

[◄][►] → Alpha - dial/numeric keys → [ENTER]

Example settings

Parameter	Input value	
Recording method	REPLACE REC	select Replace Recording
Recording Track	1	record on track 1
Time	4/4	record in 4/4 time

Replace Recording:

Select this recording mode if you are recording on a Phrase Track for the first time. If musical data already exists in the track selected for Replace Recording, the previous musical data will be erased, and replaced by the newly recorded data (☞ see II /page 28). If you wish to layer new Musical messages onto existing data in a track, set the display to MIX REC (Mix Recording) (☞ see II /page 32) before beginning to record.

⑤ Press [PAUSE]. The PAUSE indicator will light orange.

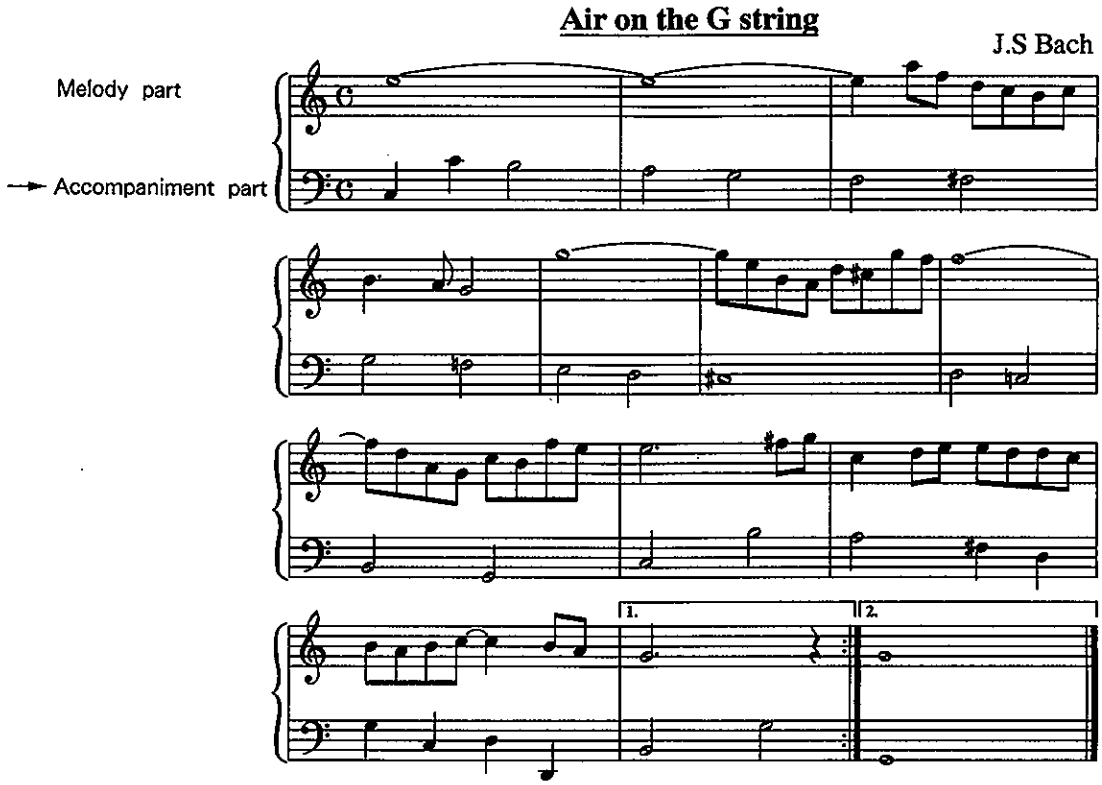
⑥ Use the Alpha - dial to set the tempo.

As you rotate the Alpha - dial toward the right, the tempo will become faster. The displayed tempo value indicates the number of beats that will occur in one minute (example: ♩= 120). The tempo can be set over the range of ♩= 10—250.

*If you are not sure of being able to play the song correctly, record at a slow tempo. When playing back, you can use the Alpha - dial to increase the tempo.

⑦ Play the following accompaniment part on the keyboard.

When you begin playing, recording will start automatically (key on start).



⑧ When you finish playing, press [STOP].

⑨ Press [RESET] to return to the beginning of the song.

⑩ Press [PLAY] to listen to the playback.

During playback, try using the Alpha - dial to adjust the tempo, and select different sounds on your keyboard.

■Record the melody while listening to the accompaniment

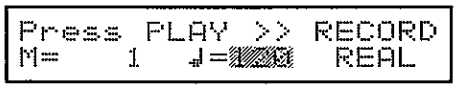
Next, record the melody part on track 2 while listening to the accompaniment you just recorded.

① Press [RESET] to return to the beginning of the song.

② Press [REC].

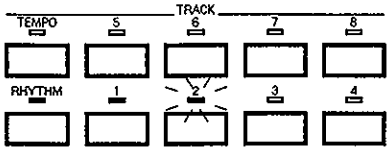
＊Since you will be recording another track with the same time signature as the accompaniment part, there is no need to modify the Replace Recording settings (by pressing [REC] once again to get the recording setting display).

When you press the key, the following display will appear.



Use the Alpha - dial to adjust the tempo.

③ Press track key [2]. It is also possible to select a track to record by pressing a track key.



When you press the key, the indicator will begin blinking.

④ Press [PLAY]. After a two - measure count, the previously recorded accompaniment will begin playing back (count in recording).

−2→−1→1→2···
△
When the display reaches 1, playback will start

⑤ While listening to the playback, play the melody part on the keyboard.

⑥ When you finish recording, press [STOP].

If you wish to re - record, press [RESET] to return to the beginning, and repeat from step ②.

■Playback the song data you recorded

You have now completed your recording of "Air on the G String". Play it back, and if you are not satisfied with it, use Replace Recording to re - record either track as many times as you like. Here we will explain some convenient ways in which you can playback a song for checking purposes.

○Quadruple speed play (fast playback)

While you hold [PLAY] and press [▶], the song will be played at four times normal speed. (The pitch will remain the same.) When you release the button, the speed will return to normal.

○Quarter speed play (slow playback)

While you hold [PLAY] and press [◀], the song will be played at one fourth of the normal speed. (The pitch will remain the same.) When you release the button, the speed will return to normal.

○Repeat play (continuous playback)

If you hold [SHIFT] and press [PLAY] to start playback, the song will continue repeating. Press [STOP] to stop playback.

＊You can also repeatedly playback a desired area of a song. This is called Block Repeat (see Ⅱ /page 16).

○Track mute play (playback only desired tracks)

During playback, or in the standby condition, the track indicators of all tracks which contain musical data will light. When you press the track key of a track which is lit, it will alternate between lit and off. When a track is turned off, the musical data in that track will not be transmitted from MIDI OUT. In this way, you can playback only the desired tracks. This can also be done during playback.

＊If you mute the melody track, only the accompaniment will be heard, providing "music minus one" for you to play along with.

■Save song data to disk

The song you recorded will be lost if you turn the power off. If you wish to keep the song, you must save the song data from internal memory to a floppy disk.
Song data in internal memory is distinguished by the Song Number. Song data on disk, however, is distinguished by name (Song Title), and song numbers are not used. The MC - 50 will not allow you to save song data to disk before you have given it a Song Title. Now let's save the "Air on the G String" to disk.

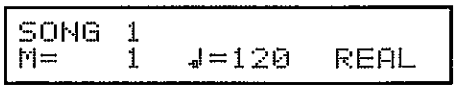
＊To save two or more songs to disk in a single operation, use the mode 2 Disk Save (☞ see Ⅱ /page 137).

【Save song data】

Make sure you have a floppy disk that has been formatted by the MC - 50 (☞ see Ⅰ /page 34).

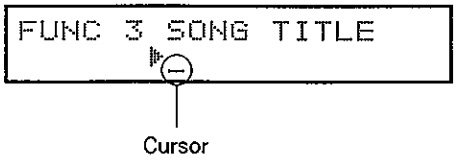
● From the standby condition

① Select the song number you wish to save.
Move the cursor to the right of SONG, and use the Alpha - dial (numeric keys →[ENTER]) to select.



＊If internal memory contains only the "Air on the G String", you will not be able to select any other song number.

② Move to the Song Title display.
[FUNC]→[3](numeric key 3) /Alpha - dial →[ENTER]



③ Specify a Song Title of up to 13 characters.
For this example, input "Air".

The horizontal line blinking beside " ▌ " is the cursor for this display, and indicates the position at which a character will be input. To select characters of the alphabet, use the numeric keys, and move the cursor using [◀][▶].

《Inputting characters from the numeric keys》

The numeric keys can be used to input the numerals and alphabetical characters printed on each key. Each time you press a key, the display will cycle through these characters. To enter lower - case characters, hold [SHIFT] as you press the numeric keys.

Numeric key	Order of display	Numeric key	Order of display
[0]	0→ (Space) →0	[5]	5→M→N→O→5
[SHIFT] + [0]	0→ (Space) →0	[SHIFT] + [5]	5→m→n→o→5
[1]	1→A→B→C→1	[6]	6→P→Q→R→6
[SHIFT] + [1]	1→a→b→c→1	[SHIFT] + [6]	6→p→q→r→6
[2]	2→D→E→F→2	[7]	7→S→T→U→7
[SHIFT] + [2]	2→d→e→f→2	[SHIFT] + [7]	7→s→t→u→7
[3]	3→G→H→I→3	[8]	8→V→W→X→8
[SHIFT] + [3]	3→g→h→i→3	[SHIFT] + [8]	8→v→w→x→8
[4]	4→J→K→L→4	[9]	9→Y→Z→!→9
[SHIFT] + [4]	4→j→k→l→4	[SHIFT] + [9]	9→y→z→?→9

日 ·· press [1] twice
↓
press [▶]
↓
i ·· [SHIFT] + press [3] four times
↓
press [▶]
↓
r ·· [SHIFT] + press [6] four times

*To delete the character at the cursor position, press [PAUSE]+[◀].

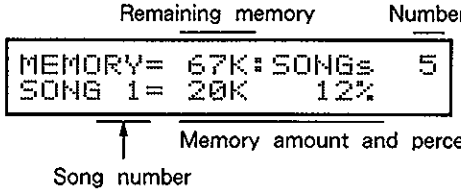
*You can also use the Alpha - dial to select characters. This allows you to select symbols in addition to numerals and alphabetical characters. As you rotate the dial to the right, the following characters will appear.

Space A···Z a···z 0···9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

④ Press [STOP] to finalize the Song Title.
You will return to the standby condition.

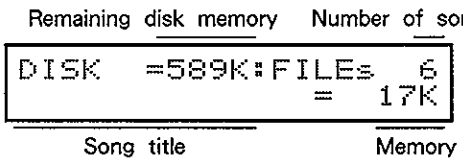
⑤ Insert a disk (with the protect tab in the WRITE position) into the disk drive.

⑥ Move to the Available display, and check the amount of memory used by the song you wish to save.
[SHIFT]+[AVAIL]


Remaining memory
Number of songs
MEMORY= 67K:SONGs 5
SONG 1= 20K 12%
Memory amount and percentage used by the displayed song number
Song number

⑦ Move to the Disk Avail display, and check the amount of free memory remaining on disk.

[MICROSCOPE]



If the amount of memory used by the song is greater than the amount of free memory remaining on disk, it will not be possible to save the data. In this case, insert another disk.

⑧ Execute the Save operation that you specified.

[SHIFT]+[SAVE]

When saving is complete, you will return to the standby display.

⑨ Press the eject button and remove the disk. After removing the disk, set its protect tab to the PROTECT position.

■Load song data from disk

The process of transferring song data (Song File) from disk into internal memory is called Loading. To playback song data from disk, you must first load it into internal memory.

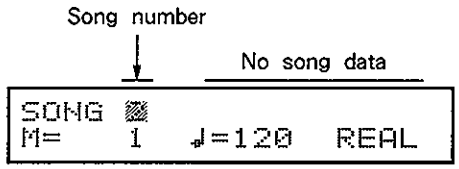
＊If you wish to load two or more songs in a single operation, use the mode 2 Disk Load operation (☞ see Ⅱ /page 136).

【Loading a single song file】

● From the standby condition

① Insert the disk (with the protect slider at PROTECT) into the disk drive.

② Select a song number which does not contain song data. Move the cursor to the song number, and select using [SHIFT] + Alpha - dial.



③ Move to the Disk Available display.
[SHIFT] + [AVAIL] → [MICROSCOPE]

④ Select the song file to load, and execute loading.
Alpha - dial → [LOAD]

⑤ When loading is completed, you will return to the standby display.

⑧ MULTITRACK RECORDING

This chapter explains effective ways to use a variety of parts in your recordings, and illustrates some of the more advanced operations. As our example, we will use Mendelssohn's "Spring Song", in a simple four - part arrangement of melody, bass, backing, and rhythm. (Since the original song is long, it has been shortened for this example.) After completing this song, you can go on and try other songs from commercially available sheet music.

1. Recording Method

In multitrack recording, you can record each part on a track using the recording method most appropriate for the part.

■ Phrase Tracks

There are two ways in which you can record a Phrase Track; Realtime recording, in which your keyboard playing is recorded exactly as you play, and Step Recording, which allows you to numerically specify the length, etc. of each note, and specify the pitch using the numeric keys or from a keyboard. Each method has its own advantages.

○Realtime recording

- is much quicker than steprecording. You can **quantize** afterward if necessary.
- faithfully reproduces musical nuances of timing and dynamics.
- makes it easy to enter continuous control changes such as modulation wheel, pitch bend wheel, or aftertouch.

Quantize (☞ see I /page 71):

This operation corrects the unevenness in note timing that may occur when you record a song using Realtime Recording. You can record without worrying about slight timing mistakes, and then use the Quantize function afterward.

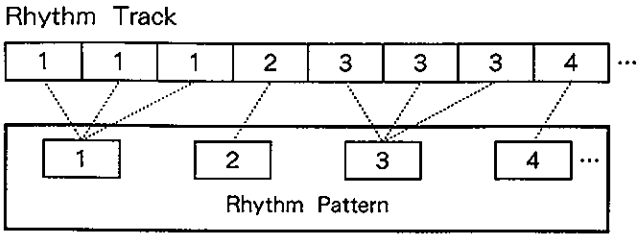
○Step recording

- allows you to accurately record difficult (or unplayable) phrases.
- is useful when you want a mechanical feel, as in techo - pop.
- is convenient when recording phrases or patterns that will be repeated.

Phrase Track recording (tracks 1—8) ——— REAL / STEP

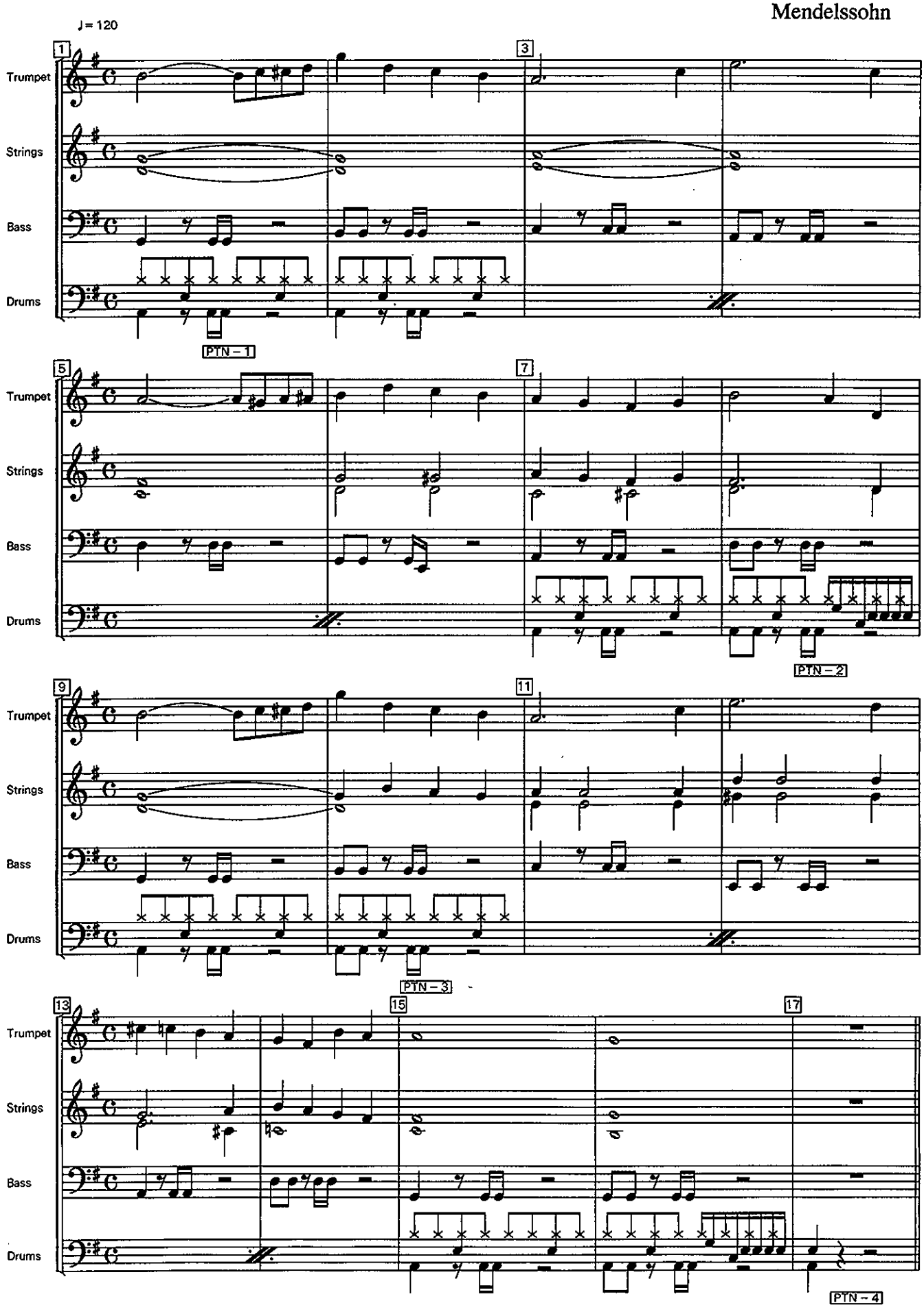
■ Rhythm Track

To record the Rhythm Track, you will create several Rhythm Patterns, and arrange these Rhythm Patterns in the Rhythm Track. Each Rhythm Pattern is one measure long, meaning that the Rhythm Track is created one measure at a time.



Rhythm Track recording ——— RHYTHM ——— R-PATTERN / R-TRACK

Spring Song

Mendelssohn

2. Before you begin recording

If you are recording a song from printed music, it will be easier if you make the following preparations.

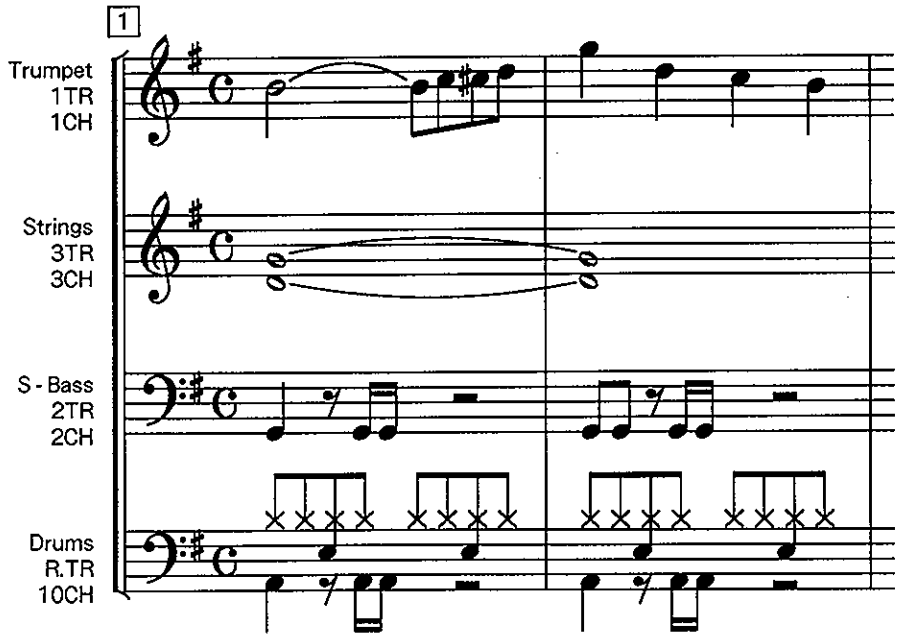
●Decide the recording method for each part

We will record the rhythm part in the Rhythm Track, and the melody, backing, and bass parts in Phrase Tracks. Use realtime recording to record the brass and strings parts of the sample song, and Quantize them later if necessary. The bass part consists of the same phrase repeated, so we will record it using step recording.

●Decide the order in which you will input the musical data

You may begin recording from any track you like, but in general, parts are recorded in the order of drums → bass → melody → backing. The reason for this is that once the drum part has been input, the overall structure of the song is easier to understand. In this chapter we will explain the recording process in this order, but you may use any order you find convenient.

●Decide the track and channel of each part

Decide which sound you will use for each part, and the track and channel on which you will record it. For each part, you can select from tracks 1—8 and channels 1—16.

《Example settings for the sample song》

Part	Sound	Track	MIDI channel
Melody part	Trumpet	Track 1	ch.1
Bass part	Slap Bass	Track 2	ch.2
Backing part	Strings	Track 3	ch.3
Rhythm part	Drum	Rhythm track	ch.10

＊Phrase Tracks 4—8 are not used in this example.

●Mark the measure numbers on the sheet music

The sheet music may jump from one measure to another measure because of repeat marks etc. When you record a song from sheet music, the procedure will go smoothly if you take a moment to mark measure numbers on the sheet music. This will also be helpful if you later need to input additional data or make corrections, since the MC - 50 lets you jump immediately to a specified measure number. Measure numbers are marked for every two measures of the example song.

＊For an explanation of musical symbols, refer to "Reading music" at the end of this manual.

●Mark the Rhythm Pattern numbers on the sheet music

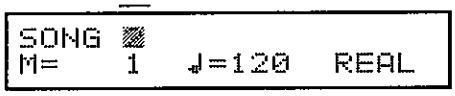
Notice that the rhythm part consists mostly of repetitions of the same pattern, with fill - in patterns (short irregular phrases at structural divisions of the song) added for occasional emphasis. Each measure of an MC - 50 rhythm part consists of one pattern, and copies of the same pattern can be used as many times as desired. Recording will be easier if you write the Rhythm Pattern number onto the sheet music wherever the rhythm pattern needs to change. The sample song uses four different patterns.

●Select a song number which does not contain song data

If internal memory already contains song data, recording new data into the same song number will either combine the new with the old data, or erase the old data. Before you continue, make sure to select a song number which does not already contain song data.

From the mode 1 standby condition, move the cursor to the right of "SONG", and use [SHIFT] + Alpha - dial to select a song number which does not contain song data. (It is not possible to select a song number of 9 or higher.)

Song number



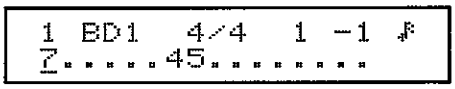
After selecting a song, you can begin recording the parts of the multitrack recording.

3. Rhythm Part

You will create the rhythm part by first making several Rhythm Patterns, and then arranging these Rhythm Patterns in the Rhythm Track. When using Step Recording to record a Rhythm Pattern, you can divide the measure using a grid (of 2 to 512 steps) and specify a Velocity Code (over a range of eight levels) at each position in the grid where you want a note to sound.

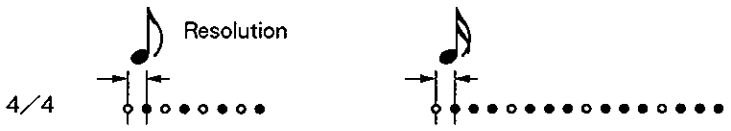
Initial settings for each Velocity Code

Velocity Code	1	2	3	4	5	6	7	8
Velocity Value	16	32	48	64	80	96	112	127

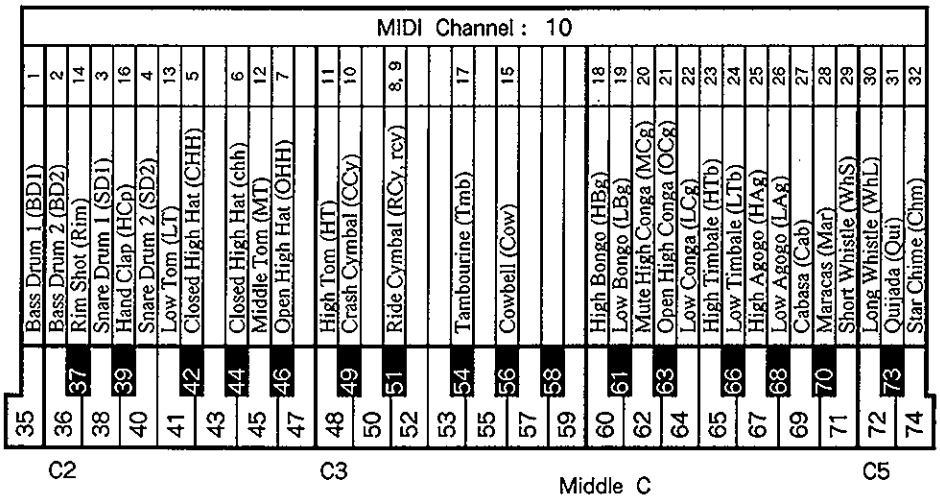


Specify a Velocity Code at on the grid

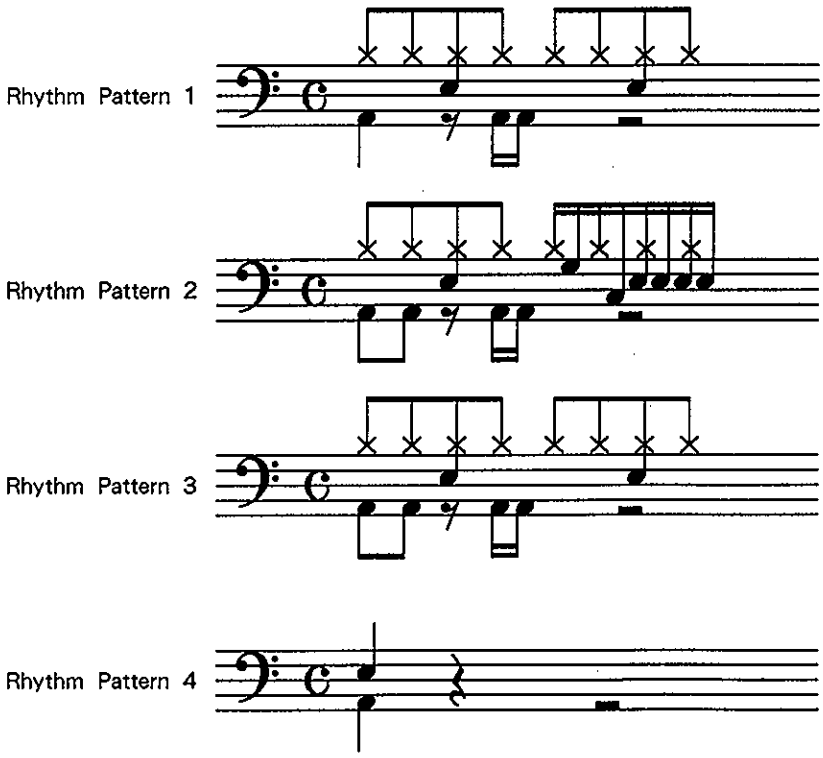
*The number of grid divisions is determined by the time signature, and by the shortest note value (referred to as the **Resolution**) used in that pattern. For example, a measure of 4/4 time will be divided into 8 steps if you select a resolution of an eighth note, but will be divided into 16 steps if you select a Resolution of a sixteenth note.



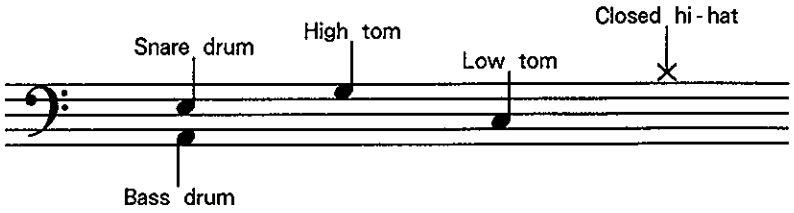
Before you begin recording a Rhythm Pattern, make the following note number settings for the rhythm sounds (rhythm instruments) of your MIDI rhythm sound module(☞ see I /page 78).


MIDI Channel : 10
1 Bass Drum 1 (BD1) 35
2 Bass Drum 2 (BD2) 36
14 Rim Shot (Rim) 37
3 Snare Drum 1 (SD1) 38
16 Hand Clap (HCp) 39
4 Snare Drum 2 (SD2) 40
13 Low Tom (LT) 41
5 Closed High Hat (CHH) 42
6 Closed High Hat (chh) 43
12 Middle Tom (MT) 44
7 Open High Hat (OHH) 45
46 47
11 High Tom (HT) 48
10 Crash Cymbal (CCy) 49
8, 9 Ride Cymbal (RCy, rcy) 50
51 52
17 Tambourine (Tmb) 53
54 55
15 Cowbell (Cow) 56
57
58 59
18 High Bongo (HBg) 60
19 Low Bongo (LBg) 61
20 Mute High Conga (MCg) 62
21 Open High Conga (OCg) 63
22 Low Conga (LCg) 64
23 High Timbale (HTb) 65
24 Low Timbale (LTb) 66
25 High Agogo (HAg) 67
26 Low Agogo (LAg) 68
27 Cabasa (Cab) 69
28 Maracas (Mar) 70
29 Short Whistle (WhS) 71
30 Long Whistle (WhL) 72
31 Quijada (Qui) 73
32 Star Chime (Chm) 74
C2
C3
Middle C
C5

The rhythm part for this example consists of the following four Rhythm Patterns. First we will create these four Rhythm Patterns (patterns 1—4).

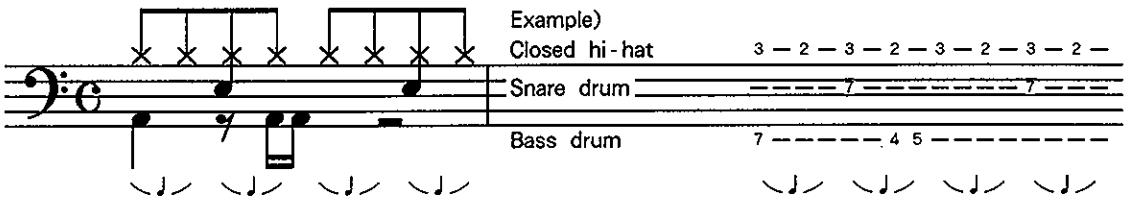


< Example drum score >



■Recording Rhythm Pattern 1

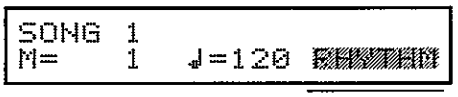
< Example: Inputting velocity codes for pattern 1 >



● From the standby condition

① Set the recording mode to "RHYTHM".

Use [◀][▶] to make "REAL" blink, and use the Alpha - dial to change it to "RHYTHM".



Recording mode

② Press [REC], use the Alpha - dial to select "R-PATTERN", and press [ENTER].

Rhythm Pattern number

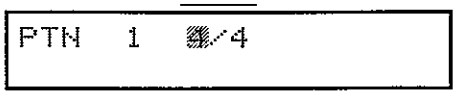
③ Move the cursor to the right of PTN, and use the Alpha - dial (or numeric keys + [ENTER]) to select the pattern number.

Since we are now creating pattern 1, press [ENTER] without changing the setting.

④ Move the cursor to the right of PTN 1, and use the numeric keys + [ENTER] (or the Alpha - dial) to specify the time signature.

Press [4] → [ENTER] → [4] → [ENTER]

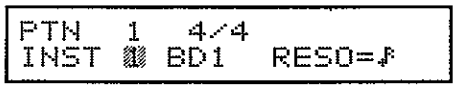
Time signature



⑤ Specify the rhythm instrument.

Use [SKIP] or [RESET] to select the instrument.

Press [SKIP] to select an instrument of a higher number. Press [RESET] to select an instrument of a lower number.



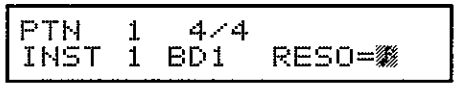
Rhythm instrument number

＊We will start with the bass drum.

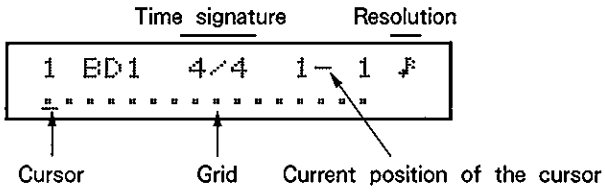
Select the instrument " 1 BD1 ", and press [ENTER].

⑥ Specify the resolution (the shortest note value to be used).

Since the shortest note value in the bass drum of Pattern 1 is a 16th note, use the Alpha - dial to specify this, and press [ENTER].



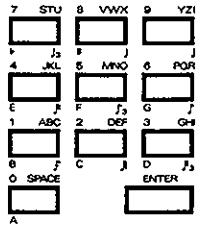
＊The grid indicates the position at which rhythm notes will be input.
The number of grid divisions will depend on the time signature and resolution you select.



＊The upper right of the display shows the position of the cursor.

Resolution can also be input using the numeric keys.

Note value symbols are printed below each numeric key. Press a numeric key to select a Resolution of the corresponding note value.

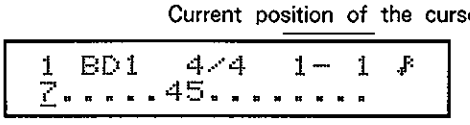


⑦ Press [SHIFT]+[PLAY].The metronome will begin sounding in 4/4 time, and you can begin input.

As you input Velocity Codes (numbers to indicate the strength of each note), the pattern will be repeated, allowing you to listen to the pattern as you build it up.

⑧ Use [◀][▶] to move the cursor in the grid, and use the numeric keys to enter a Velocity Code at the appropriate positions of the grid to enter the bass drum part shown in the score for pattern 1.

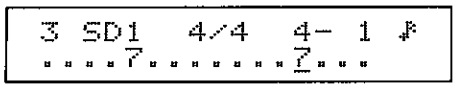
You can specify the Velocity Code over eight levels, from 1 to 8. Higher numbers are louder.



Try this out by inputting [7] at cursor position 1 – 1, [4] at 2 – 3, and [5] at 2 – 4. If you input a Velocity Code at the wrong place, move the cursor to the grid position of the mistake, and press numeric key [0] to erase it.

＊When recording the rhythm, it is important to add variations in velocity. If you use the same Velocity Code for all notes, the performance will be mechanical and uninteresting.

⑨ Press [SKIP] to select instrument "3 SD1", and input Velocity Codes for the snare drum.



Input [7] at cursor position 2 – 1, and [7] at 4 – 1.

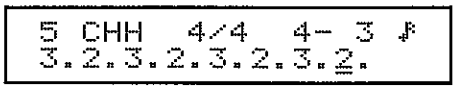
Inputting a flam

A "flam" is a short grace note added immediately before the main note. For example instead of a single snare drum beat "ta", it would play a rapid "ta - ta". The MC - 50 lets you create a similar effect by holding [SHIFT] as you press a numeric key to specify the Velocity Code.

⑩ Input the Velocity Codes for the closed hi - hat.

Press [SKIP] to select instrument "5 CHH".

Input [3] at cursor position 1 - 1, [2] at 1 – 3, [3] at 2 – 1, [2] at 2 – 3, [3] at 3 – 1, [2] at 3 – 3, [3] at 4 – 1, and [2] at 4 – 3.

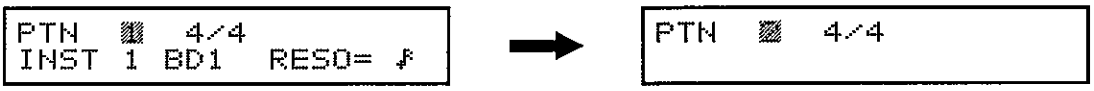


⑪ This completes pattern 1. Press [ENTER] to finalize the input values.

If you wish to stop while remaining in recording mode, press [PAUSE]. If you wish to continue to the next step, press [SHIFT] + [PLAY] to continue playing.

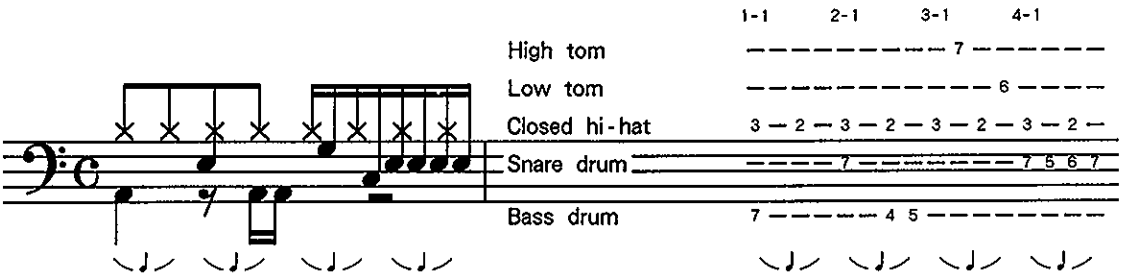
■Recording patterns 2 and 4

While the pattern continues to play, move the cursor to "PTN 1" and use the Alpha - dial to change this to "PTN 2(4)" (the currently playing pattern will stop), and press [ENTER] once again.



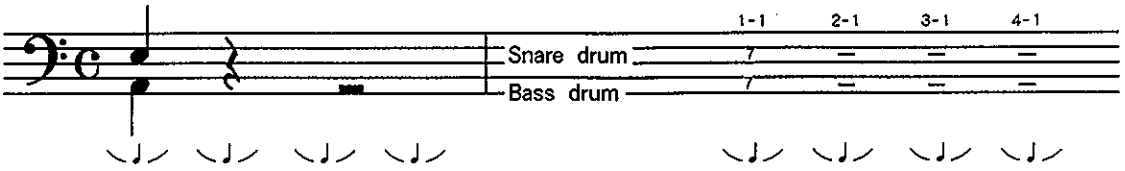
When you press [ENTER], you will be in the same condition as step ⑨ of "Recording pattern 1". Create patterns 2 and 4 just as you did for pattern 1.

< Example of Velocity Code input for pattern 2 >

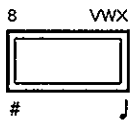


*Use a 16th note Resolution setting.

< Example of Velocity Code input for pattern 4 >



*Use a quarter note Resolution setting. To change the Resolution, press [ENTER] to move the cursor to the Resolution, press numeric key [8] (or use the Alpha - dial to change the setting to ♩), and press [ENTER] once again.

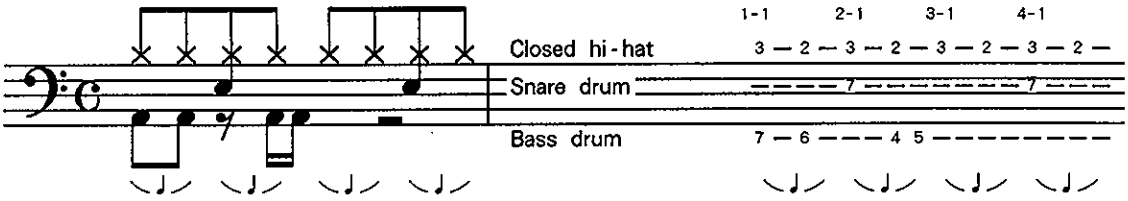


Press numeric key [8] to set the Resolution to ♩

■Recording pattern 3

As you can see from the music on page 50, pattern 3 is similar to pattern 1. In this example, we will copy pattern 1 to pattern 3 (☞ see Ⅱ /page 46), and then modify pattern 3.

< Example of Velocity Code Input for pattern 3 >

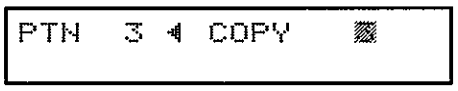


① Select the copy destination pattern number.

From the above display, move the cursor to the pattern number, and use the Alpha - dial to select pattern 3 as the copy destination.

＊If the above display does not appear, go through steps ① and ② of "Recording pattern 1".

② Hold [SHIFT] and press [2].



③ Select the copy source pattern number.

Use the Alpha - dial to select pattern 1 as the copy source, and press [ENTER].

④ Press [REC].

This completes the copying procedure.

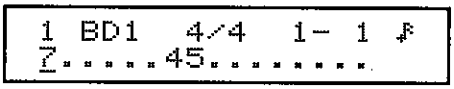
When copying is completed, you will immediately hear pattern 3 playback. To stop playback while remaining in recording mode, press [PAUSE]. To resume playback and continue input from step ⑤, press [SHIFT]+[PLAY].

⑤ Patterns 1 and 3 differ in the bass drum rhythm. In this example, we will modify just the bass drum.

Pattern 1

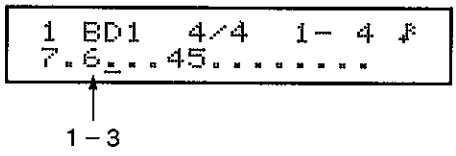
Pattern 3

Press [▶] several times until the Velocity Code input display appears.



⑥ Input velocity code 6 at position 1 – 3.

Press [▶] to move the cursor, and press [6].



This completes pattern 3.

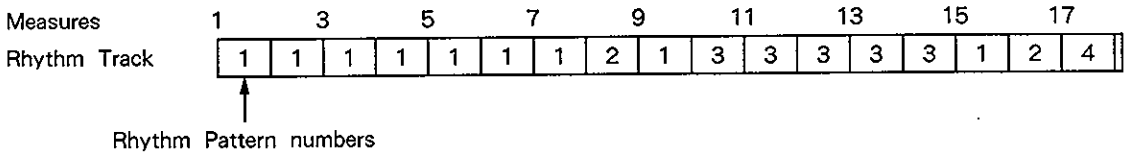
To stop playback, press [PAUSE]. To return to the standby condition, press [STOP].

*It is also possible to record rhythm pattern from a connected keyboard (☞ see II /page 44).

■ Creating the Rhythm Track

Next you will arrange these newly created Rhythm Patterns in the Rhythm Track. The Rhythm Track does not contain the actual Rhythm Pattern data, but only the pattern numbers. This means that if you later modify the Rhythm Pattern data, the playback of the Rhythm Track will be affected.

For the song we are recording in this example, we will arrange Rhythm Pattern numbers in the Rhythm Track as follows.



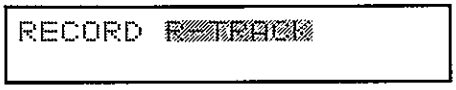
Use the following procedure to arrange the Rhythm Patterns in the Rhythm Track in the order of playback.

■ Recording the Rhythm Track

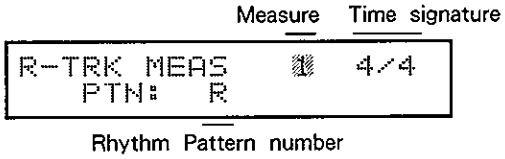
● From the standby condition

① Make sure that the recording mode is "RHYTHM". If not, use [◀][▶] to move the cursor to the recording mode, and use the Alpha - dial to select "RHYTHM".

② Press [REC], and use the Alpha - dial to select "R-TRACK".

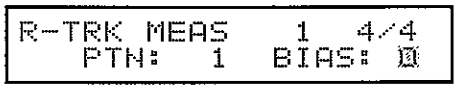


③ Press [ENTER].



④ We will specify Rhythm Pattern numbers starting with measure 1, so select measure 1.
Use [◀][▶] to move the cursor to the right of "MEAS", and press [1] → [ENTER].

⑤ Specify the pattern number to be assigned to measure 1 of the Rhythm Track.
Since measure 1 uses pattern 1, press [1] → [ENTER].



⑥ Specify the Velocity Bias.

When creating a Rhythm Pattern, you specified the velocity of each individual note. However, the Velocity Bias setting lets you specify a velocity adjustment for an entire Rhythm Pattern. For example by gradually lowering the Velocity Bias of each Rhythm Pattern, you can create fade - out effects. (Velocity Bias can be set over a range of − 99—+99.) In this example we will not adjust the Velocity Bias, so simply press [ENTER] to continue to the next measure. (Leave the Velocity Bias at "0".)

([0])→[ENTER]

You will move to measure 2.

⑦ Measure 2 also uses pattern 1, so press [1]→[ENTER].

```
R-TRK MEAS   2  4/4
  PTN:  1  BIAS: 0
```

⑧ We will not adjust the Velocity Bias, so simply press [ENTER].

You will move to measure 3.

Continue these steps to record all 17 measures of the song. The following figure shows the pattern number to input for each measure.

Measures	1	3	5	7	9	11	13	15	17
Rhythm Track	1	1	1	1	1	1	1	2	1	3	3	3	3	3	1	2	4

Rhythm Pattern numbers

⑨ This completes the recording process.

Press [STOP].

```
SONG 2
M=  17  ♩=120 RHYTHM
```

⑩ Playback the Rhythm Part.

Press [RESET] to move to the beginning of the song, and press [PLAY].

4. The Bass Part

The bass part consists of repetitions of the same phrase, and it must keep in precise timing. These qualities make it an ideal subject for Step Recording. It is possible to step record by inputting notes from the numeric keys, but in this example you will use your MIDI keyboard.

Step Recording:

Step Recording is a method of recording in which you use the numeric keys etc. to input notes one by one, specifying data such as MIDI channel, note number (pitch), velocity (dynamics), step time (the time until the next note; i.e., the note value), and gate time (the length of time that the note is actually pressed). If a MIDI keyboard is connected to the MC-50, you can input MIDI channel, note number, and velocity all at once simply by pressing a key. In this case, the previously specified Step Time will be used, and the Gate Time will be set to 75% of the Step Time (this rate can be modified freely). Of course, you can go back and change these values afterward. (Even if the Step Times are identical, a slur or tenuto note will have a longer Gate Time, and a staccato note will have a shorter Gate Time.) To input a chord, press two or more notes together. (Do not release them until all notes of the chord have been pressed.) When you release all the notes, you will advance to the next step.

■Step recording using a MIDI keyboard

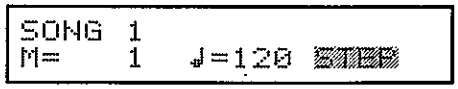
Input the bass part of the musical example (page 47) into track 2 on channel 2. Before you begin recording, set your keyboard to transmit channel 2.

*If the keyboard you are using does not allow you to change the transmit channel, use an MC-50 editing operation to convert the MIDI channel after recording (☞ see I /page 82).

① Press [RESET] to move to measure 1.

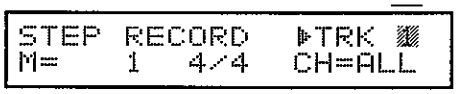
② Set the Recording Mode to "STEP".

Use [◀][▶] to make "RHYTHM" blink, and use the Alpha - dial to change it to "STEP".



③ Press [REC] to enter recording standby.

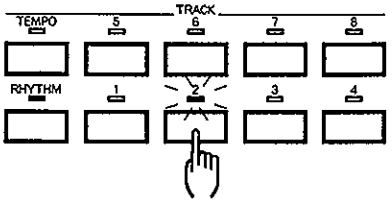
The track to be recorded



④ Specify the track you wish to record.

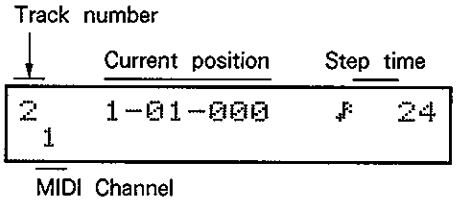
Press track key [2].

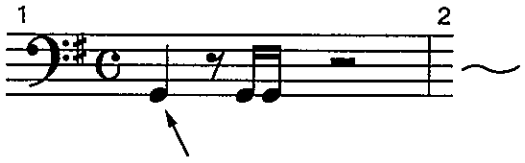
(The track 2 indicator will light.)



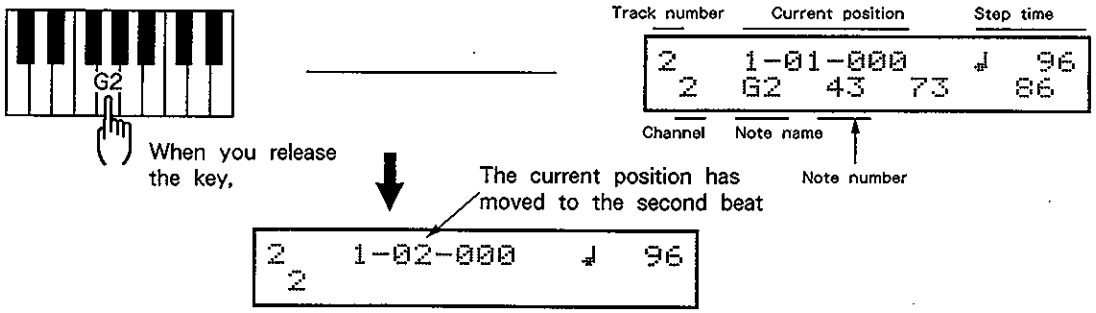
⑤ Press ENTER to enter step recording input mode.

*If you wish to begin step recording from a measure for which rhythm data does not exist, specify the time signature and then press ENTER.



⑥ Specify the note value (step time) of the notes to be recorded.

Since the first note is a quarter note, use the Alpha - dial to set the Step Time to "♩ 96".

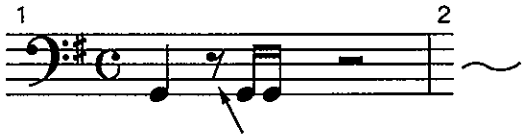
⑦ Press the G2 key on your keyboard.



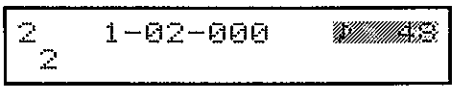
This will input the note number, MIDI channel, velocity, and step time (and gate time). As necessary, move the cursor to each parameter of the note, and use the Alpha - dial to modify the value.

＊The initial values of step time and gate time will be as follows.

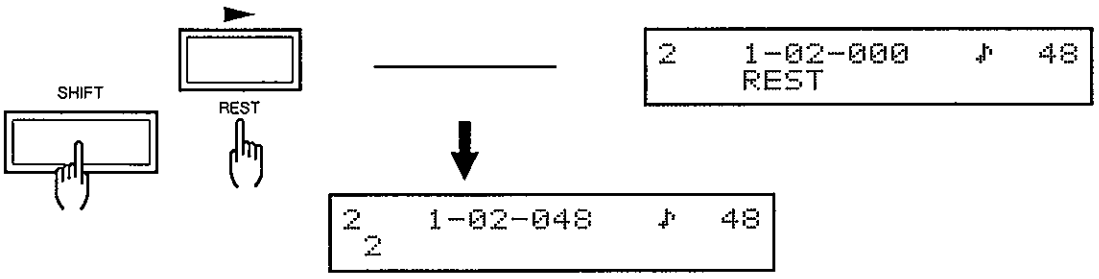
Note symbol	Step time	Gate time
𝅘𝅥𝅯	6	4
𝅘𝅥𝅯	12	9
𝅘𝅥𝅯₃	16	12
𝅘𝅥𝅯	24	19
𝅘𝅥𝅯₃	32	26
𝅘𝅥𝅯	48	41
𝅘𝅥₃	64	56
𝅘𝅥	96	86
𝅗𝅥	192	178

⑧ Next we will enter an eighth note.

Specify the step time.

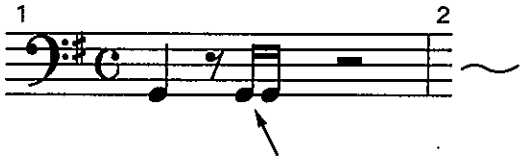
Since this is an eighth note, use the Alpha - dial to set the step time to "♪ 48".



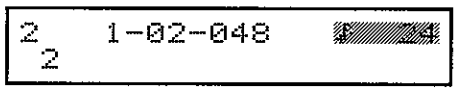
Hold [SHIFT] and press [▶] once to enter a rest of the specified step time.



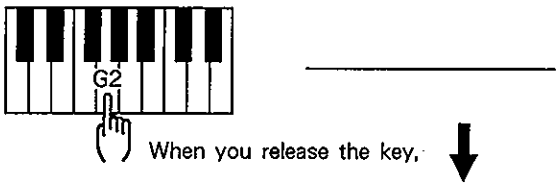
＊This simply advances the current position by the length of the step time. In reality, there is no such thing as "rest data".

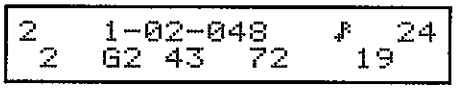
⑨ Press the G2 key on your keyboard.

Specify the step time.

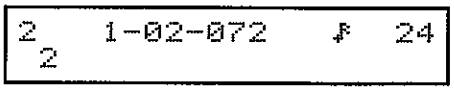
Since this is a sixteenth note, use the Alpha - dial to set the step time to "♪ 24".

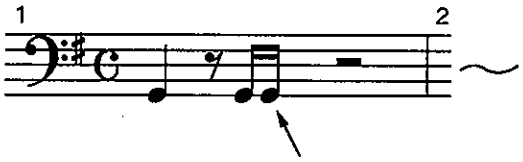


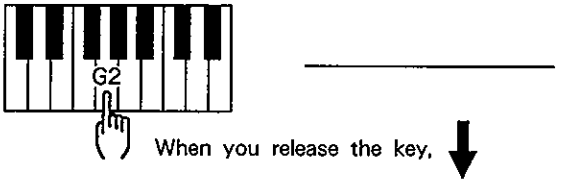
Press the G2 key on your keyboard.

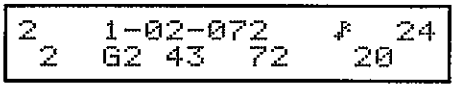


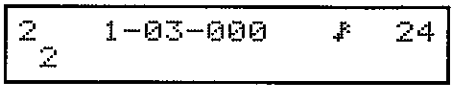


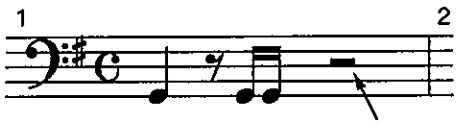


⑩ Press the G2 key on your keyboard.

Since this is also a sixteenth note, press the G2 key on your keyboard without changing the step time.

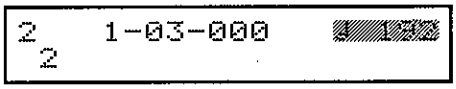




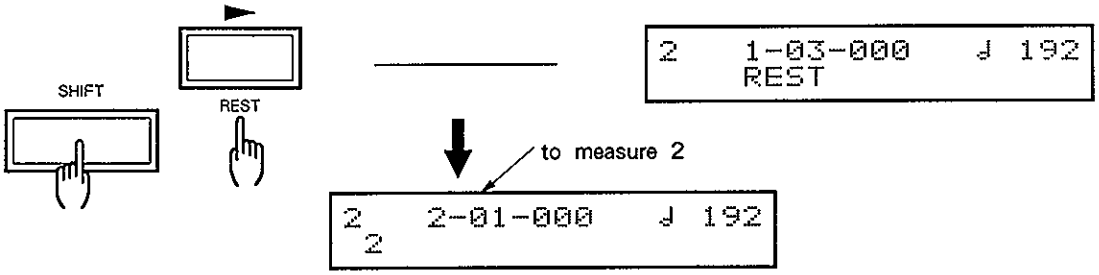


⑪ Finally, input a half - note rest.

Specify the step time.

Since this is a half note, use the Alpha - dial to specify a step time of "♩ 192".



Hold [SHIFT], and press [▶] once.



This completes the input for the first measure.

In the same way, input the rest of the song to measure 16.

When you finish, press [STOP], press [RESET] to return to the beginning of the song, and press [PLAY] to hear the bass part.

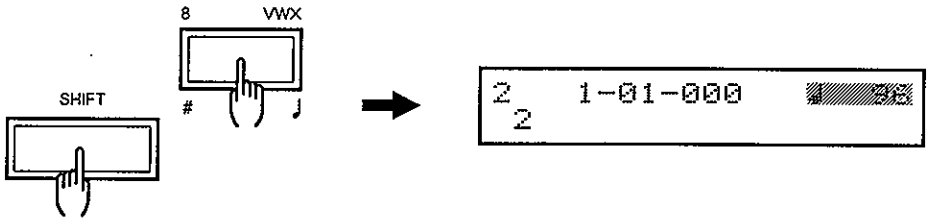
Some convenient functions

During step recording, you can use the following functions for more efficient data entry.

○Numeric key input

You can specify the step time using not only the Alpha - dial, but also by holding [SHIFT] and pressing a numeric key. (Note values are printed at the lower right of each numeric key.)

Example : [SHIFT] + [8] will specify "♩ 96"



○To correct a note

If you input a wrong note, press [RESET].

Each time you press [RESET], you will step back one note, and the data at that location will be erased. Re - enter the correct data.

○Copy

If the same phrase is repeated several times, you can use the Copy function (☞ see II /page 96).

5. The Melody Part and Backing Part

Use realtime recording to record the melody part and the backing part. The following procedure will refer to the melody part. After you finish, record the backing part in the same way.

Since the melody part will be recorded in track 1 on channel 1, set your MIDI keyboard to transmit on channel 1. (The backing part will be recorded in track 2 on channel 3, so set your MIDI keyboard to transmit on channel 3.)

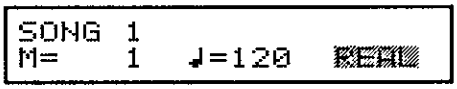
*If the keyboard you are using does not allow you to change the transmit channel, use an MC-50 editing operation to convert the MIDI channel after recording (see I /page 82).

【Procedure】 ● From the standby condition

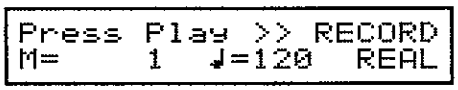
① Press [RESET] to move to measure 1.

② Set the recording mode to "REAL".

Use [◀][▶] to make "STEP" blink, and use the Alpha - dial to select "REAL".



③ Press [REC] to enter recording standby.

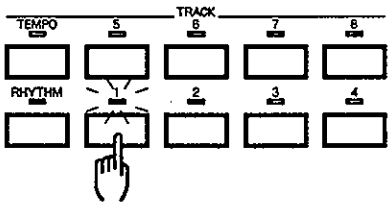


The metronome will begin sounding.

Use the Alpha - dial to adjust the tempo to a comfortable speed.

④ Specify the track you wish to record.

Press track key [1] (key [3] if recording the backing part.)



⑤ Press [PLAY].

After the two - measure count - in (at the moment the display reaches 1), begin playing.

—2→—1→1→2···

△

Begin playing at the moment the display reaches 1

⑥ When you finish playing, press STOP to end recording.

*After realtime recording, you can (if necessary) use the Quantize operation (☞ see I /page 71) to tighten up the timing of inaccurately played notes.

This completes the recording of all parts.
Press RESET to return to the beginning of the song, and press PLAY to hear the playback.

Realtime recording also allows you to use recording methods such as "Key On Start Recording" (☞ see II /page 29) to begin recording at the moment you play the keyboard, and "Mix Recording" (☞ see II /page 32) to combine the newly recorded data with the previous data of the track.

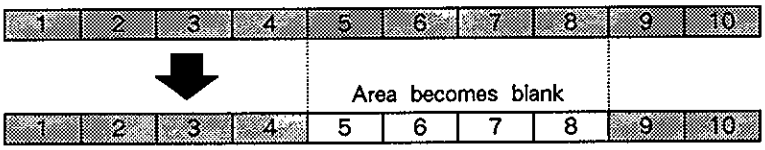
[9] DATA EDITING

Here are some of the editing operations provided by the MC - 50.

■ ERASE (use an "eraser")

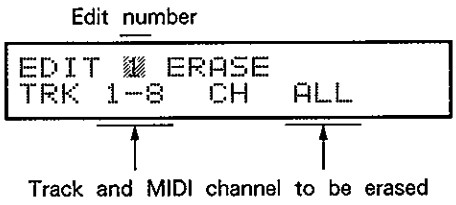
This operation erases song data from the specified area, so that the specified area becomes blank. This simply erases the data, as when you use a pencil eraser to erase notes from a written score.

Example : Erase all song data from measures 5—8 of tracks 1—8



【Procedure】 ● From the standby condition

① Press [EDIT] to get the Edit mode select display.



② Use the Alpha - dial to select EDIT1 ERASE, and press [ENTER].

③ Specify the track you wish to erase.
Press the track key for the track you wish to erase, and press [ENTER].

＊You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press [ENTER] to finalize the value.

④ Specify the MIDI channel you wish to erase.
Alpha - dial → [ENTER]

＊If you specify ALL, data of all MIDI channels will be selected.

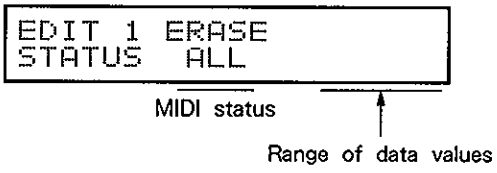
⑤ Specify the MIDI status to be erased.

You can specify one of eight types of MIDI status.

MIDI status	Range
ALL (all MIDI status)	– – –
NOTE (notes)	Note number (0—127)
PAf (Polyphonic aftertouch)	Note number (0—127)
CC (Control change)	Control number (0—127)
PG (Program change)	Program number (1—128)
CAf (Channel aftertouch)	– – –
PB (Pitch bend)	– – –
EX (Exclusive)	ID number
TU (Tune request)	– – –

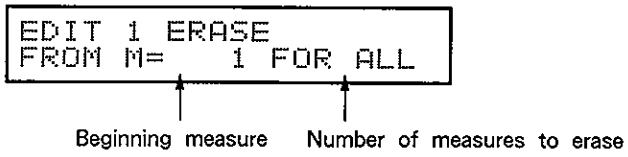
*For a detailed explanation of MIDI status, refer to page 92.

Use the Alpha - dial to select the MIDI status, and press [ENTER]. (If the selected status allows you to specify a range of data values, specify the range using the Alpha - dial → [ENTER].)



⑥ Specify the beginning measure of the area to be erased, and the number of measures to erase.

Numeric keys → [ENTER] → numeric keys → [ENTER]

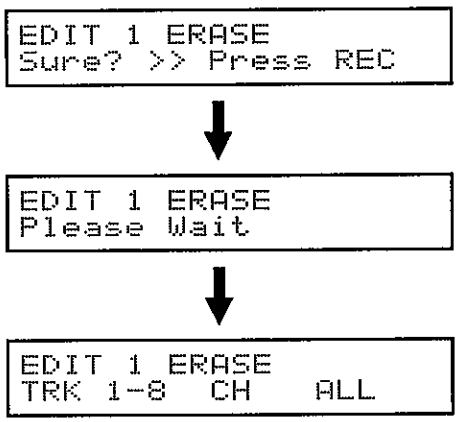


*"FOR" indicates the number of measures to erase; it does not indicate the last measure of the erased area. For example if you wish to erase from measure 2 to measure 5, specify "FROM M=2 FOR 4".

To correct a value you have specified, press [◀] to move the cursor to the item you wish to correct. Use the numeric keys to enter the correct value, and be sure to press [ENTER] to finalize the value.

⑦ The execute display will appear.

If you are sure you want to erase the specified data, press [REC].



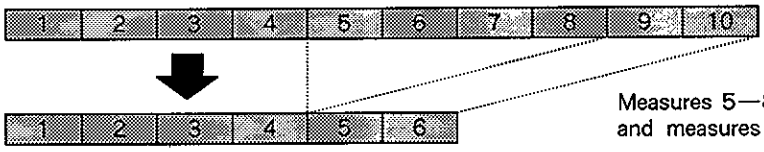
⑧ Press [STOP] to end the operation.

For details, see "EDIT 1 Erase" on page 80 of the Owner's Manual II .

■ DELETE (use "scissors")

This operation deletes the song data from the specified area, and removes the deleted area. This is similar to using a pair of scissors to cut an unwanted section out of a tape recording.

Example : Delete measures 5—8



Measures 5—8 of the original data are deleted, and measures 9 and 10 are moved forward.

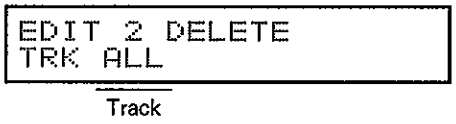
【Procedure】 ● From the standby condition

① Press [EDIT] to get the Edit mode select display.

② Use the Alpha - dial to select EDIT 2 DELETE, and press [ENTER].

③ Specify the track you wish to delete.

Press the track key for the track you wish to delete, and press [ENTER].



*You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press [ENTER] to finalize the value.

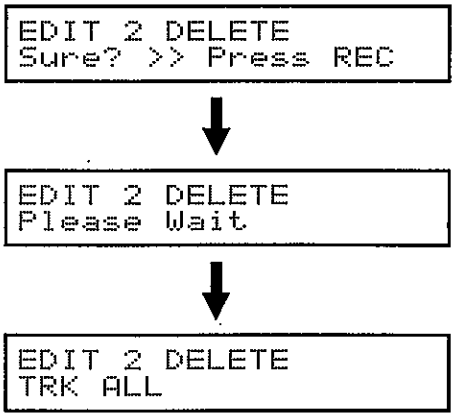
④ Specify the measures you wish to delete.

Numeric keys → [ENTER] → numeric keys → [ENTER]

*"FOR" indicates the number of measures to delete; it does not indicate the last measure of the deleted area. For example if you wish to delete from measure 2 to measure 5, specify "FROM M=2 FOR 4".

⑤ The execute display will appear.

If you are sure you want to delete the specified data, press [REC].



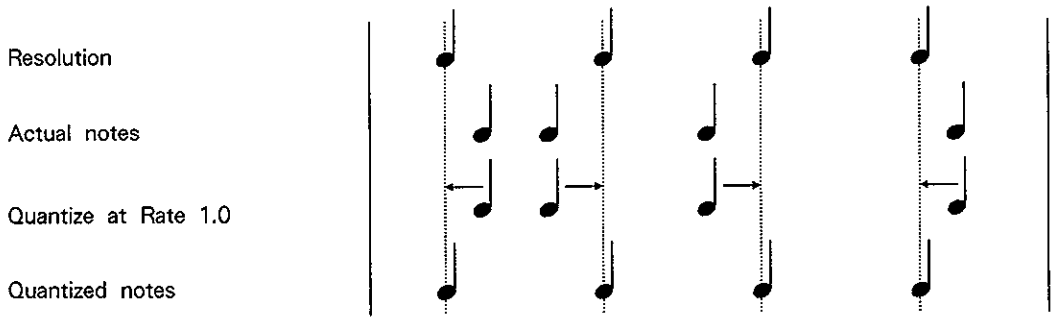
⑥ Press [STOP] to end the operation.

For details, see "EDIT 2 Delete" on page 82 of the Owner's Manual II .

■QUANTIZE (correct timing inaccuracies)

This operation corrects inaccuracies in timing that may occur when you record in realtime.

Example : Quantize with a Rate of 1.0 and Resolution of a quarter note



The Quantize operation affects only Note messages, and will not change the timing of other messages such as Bender/Modulation messages or Program Change messages. Record only note messages in the track to be quantized (☞see I /page 86).

Caution!

It is not possible to restore Quantized data to its previous condition. As a precaution, you should Copy (☞see II / page 96) the track before quantizing it.

【Procedure】 ● From the standby condition

① Press [EDIT] to get the Edit mode select display.

```
EDIT 1 ERASE
TRK 1-8  CH  ALL
```

② Use the Alpha - dial to select EDIT 9 QUANTIZE, and press [ENTER].

③ Specify the track you wish to quantize.

Press the desired track key, and press [ENTER].

```
EDIT 9 QUANTIZE
TRK 1-8 ▶ TRK 1-8
```

Track to be quantized

＊You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press [ENTER] to finalize the value.

④ Specify the track into which to place the quantized track.

Press a track key, and press [ENTER].

Track after being quantized

*You can also specify the track using the Alpha - dial or the numeric keys. (The track keys cannot be used to specify TRK1—8.) When using the numeric keys, be sure to press [ENTER] to finalize the value.

⑤ Specify the MIDI channel of the song data to be quantized.

Numeric keys → [ENTER]

MIDI channel

⑥ Specify the minimum note value (Resolution) of the data to be quantized.

Alpha - dial → [ENTER]

Resolution

*You can also specify the note value by holding [SHIFT] and pressing a numeric key. A note symbol is printed at the lower right of each numeric key. Be sure to press [ENTER] to finalize the value.

⑦ Specify the amount of adjustment (the quantization Rate).

Alpha - dial → [ENTER]

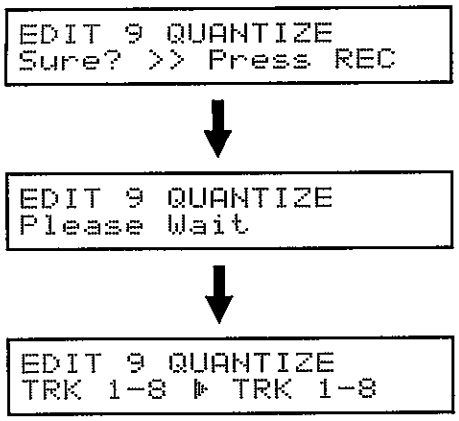
*If you quantize notes precisely to the specified note value, the performance will sound mechanical. We suggest that you set the rate to approximately 0.8. For details, see page 94 of the Owner's Manual II.

⑧ Specify the measures to be quantized.

Numeric keys → [ENTER] → numeric keys → [ENTER]

*"FOR" indicates the number of measures to quantize; it does not indicate the last measure of the quantized area. For example if you wish to quantize from measure 2 to measure 5, specify "FROM M=2 FOR 4".

⑨ If you are sure you want to quantize with the specified settings, press [REC].



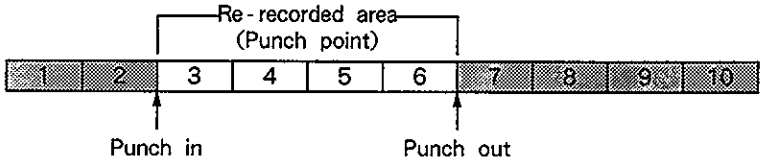
⑩ Press [STOP] to end the operation.

For details, refer to "EDIT 9 Quantize" (page 94) in the Owner's Manual II .

■AUTO PUNCH IN RECORDING (Auto Punch In; re - record a specific area)

Punch In recording allows you to re - record a specific area while listening to the song data playback. Entering record mode at the beginning of the area is called **punching in**, and exiting record mode is called **punching out**. The area to be re - recorded is determined by FUNC 6 Punch Point. There are several forms of Punch In recording, but here we will explain how to use **Auto Punch In Recording**, where you specify the punch in/out points before beginning to record.

Example : Punch In recording on measures 3—6



＊Punch In recording can be used only for realtime recording. It cannot be used in step recording.

【Procedure】 First, set the punch points.

● From the standby condition

① Press [FUNC] to get the Function select display.

```
FUNC 1 SYNC CLOCK
       INTERNAL
```

② Use the Alpha - dial to select FUNC 6 PUNCH POINT, and press [ENTER].

③ Specify the area to re - record (the punch in/out points).
Numeric keys → [ENTER] → numeric keys → [ENTER]

```
FUNC 6 PUNCH POINT
FROM M=   3 FOR   4
```

Beginning measure Number of measures to re-record

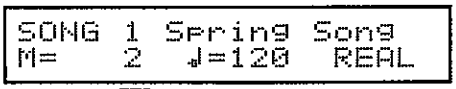
＊You can also set this using the Alpha - dial instead of the numeric keys.
After setting the value, press [ENTER].

The punch points have now been set.

④ Press [STOP] to return to the standby condition.

Next, re - record the specified area.

① Move to a measure before the area to be re - recorded.

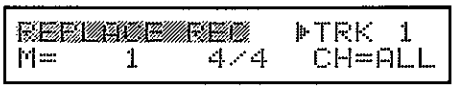


Beginning measure

② Press [REC] twice.

③ Specify the recording procedure.

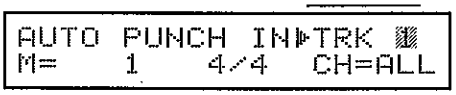
Use the Alpha - dial to select "AUTO PUNCH IN", and press [ENTER].



④ Specify the track you wish to correct.

Press the track key, and press [ENTER].

Track to be corrected



＊You can also specify this using the Alpha - dial or the numeric keys. After using the numeric keys, be sure to press [ENTER] to finalize the value.

＊Use the Alpha - dial to set a comfortable tempo.

⑤ Press [PLAY] to begin Auto Punch In Recording.

After a two - measure count - in, playback will begin.

When you come to the punch in point, begin playing. (When you begin playback, the indicator will change from blinking to lit.)

⑥ End Auto Punch In Recording.

When you pass the punch out point, press [STOP] to stop recording.

⑦ When you are finished with Auto Punch In Recording, change the recording mode from "AUTO PUNCH IN" back to "REPLACE".

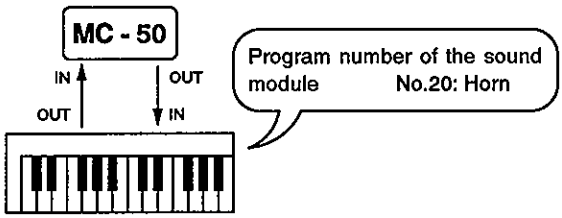
[REC] → [REC] → use the Alpha - dial to select "REPLACE" → [STOP]

＊For details, refer to "FUNC 6 Punch Point" (page 68) and "Auto Punch In" (page 34) in the Owner's Manual Ⅱ.

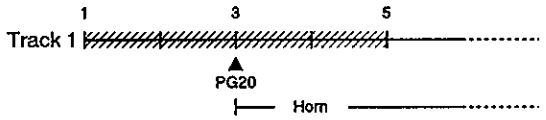
⑩ VARIOUS USEFUL PROCEDURE

⟨MICROSCOPE⟩

● Set/select a sound on the connected sound module

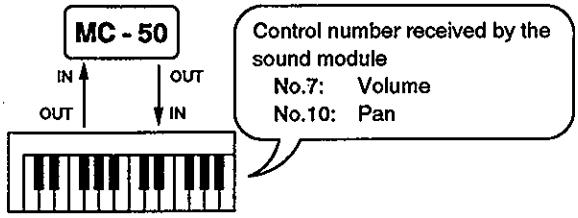


For example, if you input a Program number 20 on channel 1 into the third measure of track 1, the sound module will switch to the Horn sound at that point.



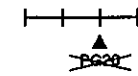
Standby condition
↓
Move to the measure at which you want to select a sound (measure 3 in this example).
↓
MICROSCOPE
↓ * 1
EDIT → 3 → ENTER
↓
Specify the MIDI message to input → ENTER
* 2 (in this example, "PG")
↓
Specify the MIDI channel for which to select a sound. → ENTER
(in this example, CH = 1)
↓
Specify the Program number → ENTER
* 3 (in this example, "20")
↓
STOP
↓
PLAY * 4

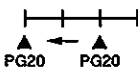
● Set/select the volume or pan of each part

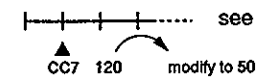


Standby condition
↓
Move to the measure at which you want to set/modify the volume or pan.
↓
MICROSCOPE
↓ * 1
EDIT → 3 → ENTER
↓
Specify the MIDI message you wish to input → ENTER
* 2 (in this example, "CC")
↓
Specify the MIDI channel which you want to set/modify. → ENTER
↓
Specify the Control number → ENTER
Specify volume: 7
Specify pan: 10
↓
Set the value → ENTER
* 5 (the range of settings is 0—127)
↓
STOP
↓
PLAY * 4

These MIDI messages can be...

- Deleted  see Reference manual page 115

- Moved  see Reference manual page 118

- Modified  see Reference manual page 113

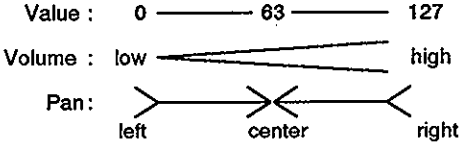
* 1: If you wish to input the message at a location other than the first beat of a measure, or at a specific clock, specify the location here (using the Alpha - dial, numeric keys, and cursor)

* 2: PG = Program Change message
CC = Control Change message

* 3: The manual for your sound module will explain which sound will be selected by each incoming Program number.

* 4: For the newly input message to have an effect, you must begin playback from a measure preceding the message.

* 5:



〈DISK〉

● Display the remaining amount of memory

Remaining internal memory

↓ Standby condition

↓ SHIFT + AVAIL

↓ Remaining internal memory, number of songs, and size of current song

↓ STOP

Remaining disk memory

↓ Standby condition

↓ Insert disk

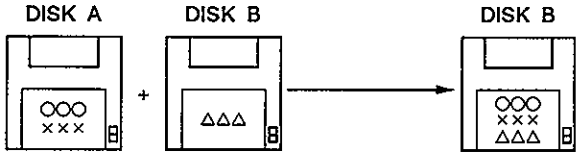
↓ SHIFT + AVAIL

↓ MICROSCOPE

↓ Remaining disk memory and number of songs (use the Alpha - dial)

↓ STOP

● Combine song files from two disks into one disk



Use this to organize your song files on disk.

SHIFT + MODE → 4 → ENTER

↓ 3 → ENTER

↓ (ENTER)

↓ Insert the copy source disk (Protect Slider "PROTECT") → ENTER

↓ Insert the copy destination disk (Protect Slider " WRITE") → ENTER

↓ ⋮

Exchange disks as many times as necessary

↓ ⋮

↓ STOP

↓ SHIFT + MODE → (1) → ENTER

● Make a copy of a floppy disk

SHIFT + MODE → 4 → ENTER

↓ 2 → ENTER

↓ (ENTER)

↓ Insert the copy source disk → ENTER

↓ Insert the copy destination disk (Protect Slider " WRITE") → ENTER

↓ ENTER

↓ Insert the copy source disk → ENTER

↓ Insert the Copy destination disk → ENTER

↓ ⋮

Exchange disks as many times as necessary

↓ ⋮

↓ STOP

↓ SHIFT + MODE → 1 → ENTER

● Delete song files from a floppy disk

Insert the disk (Protect Slider "WRITE")

↓ SHIFT + MODE → 2 → ENTER

↓ 3 → ENTER

↓ Display the song you wish to delete (use the Alpha - dial)

↓ SAVE

↓ SHIFT + MODE → (1) → ENTER

⟨RHYTHM⟩

● Use a MIDI keyboard to create a Rhythm Pattern

< Creating a Rhythm Pattern >

Standby condition
↓
Set the recording mode to "RHYTHM"
↓
REC → Select "R - PATTERN" → ENTER
↓
Specify the Rhythm Pattern number to create → ENTER → Specify the Time Signature → ENTER
↓
Select the instrument number → ENTER
↓
Specify the Resolution → ENTER
↓
SHIFT + PLAY
↓
(Input a Pattern)

Complex patterns can be input in several passes, adding new notes to the previously recorded notes.

If the tempo is too fast, press STOP to return to the standby display, and adjust the tempo.

You will be able to input any instrument, regardless of the instrument number shown in the display.
Use SKIP / RESET to view the Velocity Code of the instrument you are inputting.

↓
PAUSE
↓
(ENTER move to the next Pattern)
↓
STOP

< If you make a mistake >

If you have a damper pedal

Connect the damper pedal to the MIDI keyboard.
↓
Press the pedal while SHIFT + PLAY
↓
Press the key assigned to the instrument you wish to delete.
↓
Release the pedal.

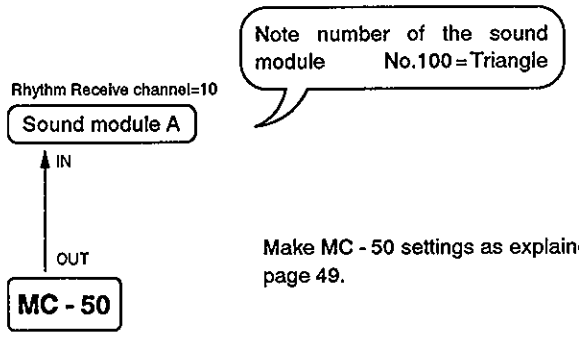
Connect the damper pedal to the MIDI keyboard.

• Delete while monitoring from SHIFT + PLAY
• Delete without monitoring PAUSE

Press SKIP / RESET to display the Velocity Code you wish to delete.
↓
Input "0" (use the numeric key)

*After creating a Pattern, follow the procedure for recording the Rhythm Track. This completes the Rhythm Track.
(See Reference page 48)

● Set the MC - 50 Instruments to the key numbers you wish to play

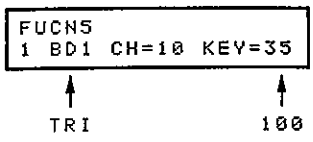


Make MC - 50 settings as explained on page 49.

⟨For example if you wish to play the "Triangle" instrument of sound module A⟩

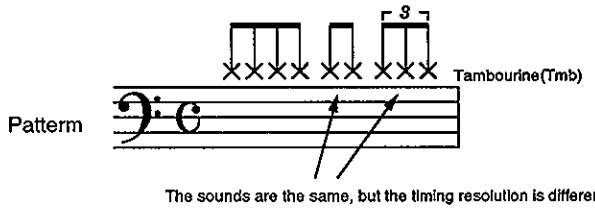
Set the value of the unused key number to "100".
(Change the instrument name to "Triangle".)

Standby condition
↓
FUNC → 5 → ENTER
↓
Specify the note number to be alted → ENTER → Set the instrument name number to "TRI" (three characters) → ENTER
↓
Set the MIDI channel → ENTER → Set the note number to "100" → ENTER
↓
STOP



〈RHYTHM〉

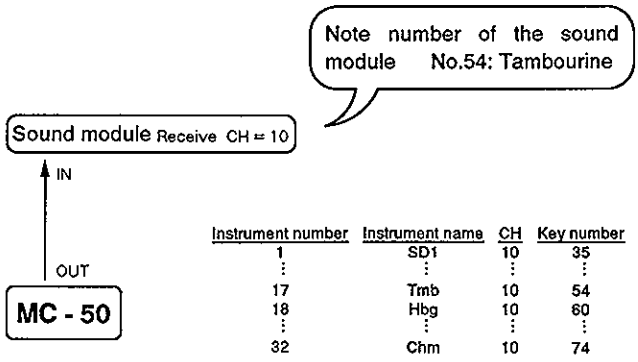
● Modify the Resolution in the middle of a pattern for a single instrument



< Input the tambourine pattern shown in the example >

The resolution of the first three beats is "♪", but the fourth beat uses a resolution of "♪₃". (see Reference page 42)

Since it is not possible to use different Resolutions inside the same pattern, set the key number of an unused instrument to the key number of the tambourine, and change the instrument name to tambourine (Tmb).



Instrument number	Instrument name	CH	Key number
1	SD1	10	35
⋮	⋮	⋮	⋮
17	Tmb	10	54
18	Hbg	10	60
⋮	⋮	⋮	⋮
32	Chm	10	74

① Modify the settings for MC - 50 instrument number 18 (for example)

Standby condition
↓
FUNC → 5 → ENTER
↓
Specify the instrument number "18" → ENTER
↓
Modify the instrument name "Tmb" → ENTER
↓
Set the MIDI channel ("10") → ENTER
↓
Set the key number "54" → ENTER
↓
STOP

This will result in the following settings

Instrument number	Instrument name	CH	Key number	
17	Tmb	10	54	(same as Initial settings)
18	Tmb	10	54	(modified settings)

② Input the tambourine pattern

Standby condition
↓
Change the recording mode to "RHYTHM"
↓
REC → Select "R - PATTERN" → ENTER
↓
Specify the Rhythm Pattern number to create → ENTER → Specify the Time Signature → ENTER
↓
Select instrument number "17" → ENTER → Select "♪" resolution → ENTER
↓
Input the first three beats (eighth notes) → ENTER
↓
Select instrument number "18" → ENTER → Select "♪₃" resolution → ENTER
↓
Input the fourth beat (eighth note triplet) → ENTER
↓
(playback to check)
↓
STOP

● Copy a Rhythm Pattern

From the same song

from the Rhythm Pattern recording display
↓
Move the cursor to the copy destination pattern number
↓
SHIFT + 2
↓
Specify the copy source pattern number
↓
ENTER
↓
REC
↓
(PLAY)
↓
STOP

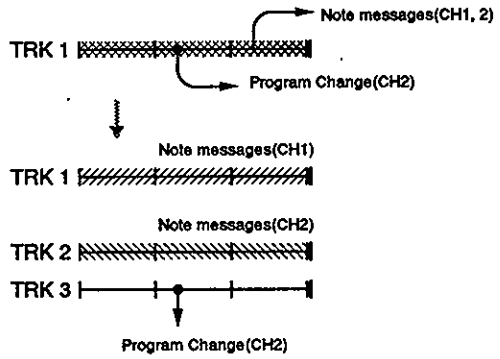
From another song

Move to the copy source song number
↓
Standby condition
↓
SHIFT + UTIL → 4 → ENTER
↓
Specify the copy source song number → ENTER
↓
REC
↓
STOP

*If you wish to eedit the copied pattern, see Reference page 42.

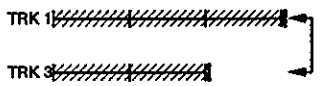
⟨SONG DATA⟩

● Extract song data



Standby condition
→ EDIT → 5 → ENTER
→ Specify the source track from which to extract → ENTER
→ Specify the destinatio track for the extracted data → ENTER
→ Specify the transfer method → ENTER
→ Specify the MIDI channel to extract → ENTER
→ Specify the type of message to extract → ENTER
→ Specify the area from which to extract → ENTER
→ REC
→ STOP

●Exchange data between Phrase Tracks



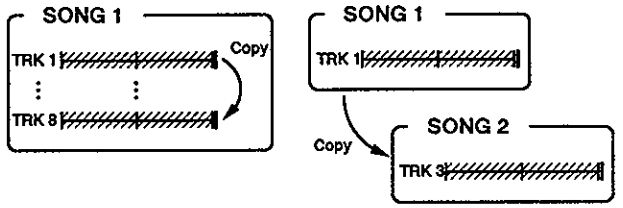
Standby condition
→ EDIT → 1 → 4 → ENTER
→ Specify the tracks to exchange → ENTER
→ REC
→ STOP

● Assign a Song Title

Standby condition
→ FUNC → 3 → ENTER
→ Assign a name → ENTER
→ STOP

● Copy song data

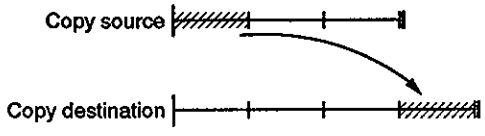
Copy within the same song　　Copy from another song



Move to the song number of the copy destination

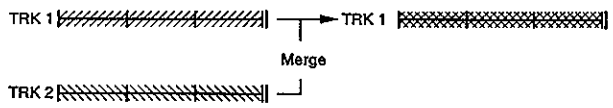
Standby condition
→ EDIT → 1 → 0 → ENTER
→ ENTER
→ Specify the song number of the copy source → ENTER
→ Specify the copy source track → ENTER → Specify the copy destination track → ENTER
→ Specify the copy method → ENTER → Specify the MIDI channels to copy → ENTER
→ Specify the area to copy → ENTER
→ * Specify the position to copy into → ENTER
→ Specify the number of times to copy → ENTER
→ REC
→ STOP

* "If you specify "M=END", the data will be copied onto the end of the current data.



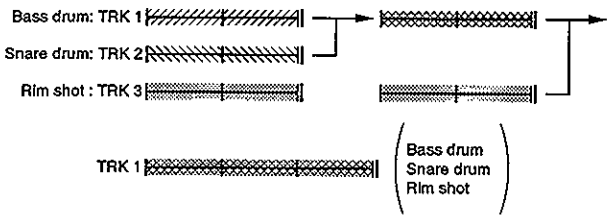
⟨SONG DATA⟩

● Combine two Phrase Tracks into one Phrase Track



Standby condition
↓
EDIT → 4 → ENTER
↓
Specify the merge destination track (TRK1) → ENTER → Specify the merge source track (TRK2) → ENTER
↓
REC
↓
STOP

* Using the Merge operation, you can create a Rhythm Part in the Phrase Track in realtime recording.

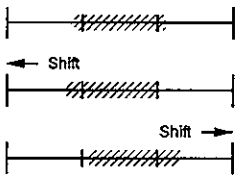


The Phrase Track allows you to create a Rhythm Part using 128 gradations of velocity. (The Rhythm Track provides only 8 gradations.)

● Transpose the Note messages in a Phrase Track

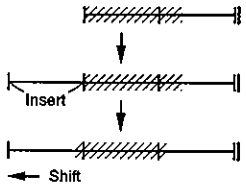
Standby condition
↓
EDIT → 6 → ENTER
↓
Specify the track to transpose → ENTER → Specify the channel to transpose → ENTER
↓
Specify the range of Note messages to transpose → ENTER
↓
Specify the amount (Bias) of transposition → ENTER
↓
Specify the area to transpose → ENTER
↓
REC
↓
STOP

● Slide the timing of Phrase Track data behind /ahead of the beat

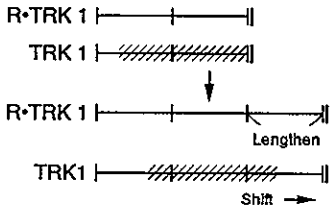


Standby condition
↓
EDIT → 1 → 2 → ENTER
↓
Specify the track to Shift Clock → ENTER → Specify the MIDI channel of the data to Shift Clock → ENTER
↓
Specify the MIDI status to Shift Clock → ENTER
↓
Specify the amount of Shift Clock → ENTER
↓
Specify the area in which to Shift Clock → ENTER
↓
REC
↓
STOP

* Movement towards the beginning is limited to the beginning of the song. If you wish to adjust the timing to be ahead of the beginning of the song, insert blank measures in measure 1 of all tracks.



* Data that has been shifted beyond the end of the song will not be played. You will have to lengthen the Rhythm Track.



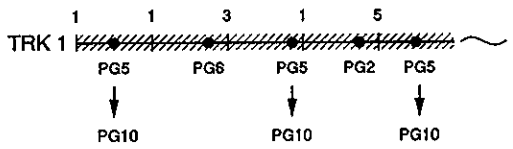
〈SONG DATA〉

● Modify the MIDI channel of a desired Part in the Phrase Track

Standby condition
↓
EDIT → 8 → ENTER
↓
Specify the track in which to convert a MIDI channel → ENTER
↓
Specify the (original) MIDI channel from which to convert the part → ENTER → Specify the (resulting) MIDI channel into which the data will be converted → ENTER
↓
Specify the MIDI status for which to convert the MIDI channel → ENTER
↓
Specify the area over which to convert the channel → ENTER
↓
REC
↓
STOP

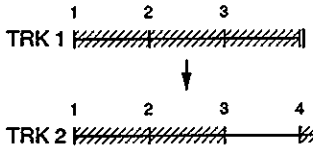
● Rewrite program numbers

Change the program number of a Program message already existing in a Phrase Track.



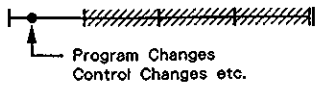
Standby condition
↓
EDIT → 1 → 5 → ENTER
↓
Specify the track to rewrite → ENTER → Specify the channel to rewrite → ENTER
↓
Specify the mode "SHIFT ♯" → ENTER → Specify the MIDI status "PG" → ENTER
↓
Specify the current program number → ENTER → Specify the new program number → ENTER
↓
Specify the area → ENTER
↓
REC
↓
STOP

● Insert blank measures into song data

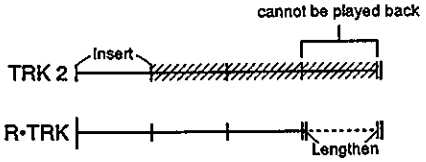


Standby condition
↓
EDIT → 3 → ENTER
↓
Specify the track into which to insert blank measures → ENTER
↓
Specify the time signature → ENTER
↓
Specify the location and number of measures to insert → ENTER
↓
REC
↓
STOP

* If you have recorded a Program Change or Control Change at the beginning of the song in a location which overlaps other musical data (such as a note), the sound module may not be able to perform the change at the correct time. In such cases, insert a blank measure at the beginning of the song to accommodate the Program Change and Control Change messages.



* If you insert blank measures only into the Phrase Tracks, the Phrase Tracks will become longer than the Rhythm Track. Since the Phrase Track data that lies beyond the end of the Rhythm Track cannot be played back, be sure to insert blank measures into the Rhythm Track as well.



⟨MIDI⟩

● Receive Channel settings

Standby condition
↓
MIDI → 1 → ENTER
↓
Specify MIDI channel to receive → ENTER
↓
STOP

● Active Sensing settings

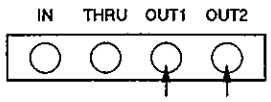
Standby condition
↓
MIDI → 3 → ENTER
↓
Press ▶ to move to "ActS"
↓
Speciy wherther or not to transmit
↓
STOP

● Soft Thru On / Off settings

Standby condition
↓
MIDI → 3 → ENTER
↓
Set Soft Thru On/Off
↓
STOP

● Specify the Output Assign for each track

Standby condition
↓
FUNC → 1 → 1 → ENTER
↓
Specify the MIDI OUT from which → ENTER to transmit
↓
STOP



⟨PLAY⟩

● Repeat playback

Standby condition
↓
FUNC → 7 → ENTER
↓
Specify the area to repeat → ENTER
↓
STOP
↓
SHIFT + PLAY

● Adjust the tempo

During playback

Rotate the Alpha - dial

While stopped

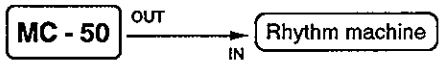
Standby condition
↓
♩= 120 blinking (use ◀/▶)
↓
Alpha - dial
(numeric keys → ENTER)

Specify the tempo that will be used each time the song data is read from disk

Standby condition
↓
FUNC → 9 → ENTER
↓
Specify the tempo → ENTER
↓
STOP
↓
Save procedure (save to disk)

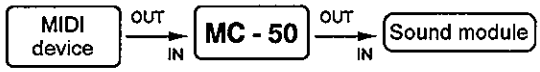
⟨SYNC CLOCK⟩

● Synchronized playback with a rhythm machine



Set the sync clock of your rhythm machine to synchronize to an external device.
↓
PLAY
↓
Restore the Sync Clock of the rhythm machine to its previous setting.

● Using an external MIDI clock to synchronize the MC - 50



Standby condition
↓
FUNC → 1 → ENTER
↓
Set the MC - 50 Sync Clock to "MIDI" → ENTER
↓
STOP
↓
Start playback on the external MIDI device
↓
Stop playback on the external MIDI device
↓
Restore the MC - 50 Sync Clock setting to "Internal"

〈OTHER〉

● Set the metronome

Standby condition
↓
FUNC → 2 → ENTER
↓
Specify beat → ENTER
↓
Specify the Beep mode → ENTER
↓
STOP

* If the rear panel Metronome knob is set too low, you will not hear the metronome.

● Restart the system

Standby condition
↓
SHIFT + MODE → 4 → ENTER
↓
6 → ENTER
↓
(ENTER)
↓
Select the system to restart → ENTER

* Tt is also possible to restart from SUPER - MRP
(☞ see II /page 171)

● Display the playing time of the song data

Standby condition
↓
SHIFT + UTIL → 2 → ENTER
↓
Specify the area for which to calculete playing time → ENTER
↓
Playing time is displayed
↓
STOP

● Delete internal memory data

Standby condition
↓
SHIFT + UTIL → 1 → ENTER
↓
Specify the song nuomber to delete (indecated by number) → ENTER
↓
REC
↓
STOP

● View the data contents of each track

< Track monitor >

Check which channels are present in each track

TRACKMONITOR (tracks 1—4)
↕
TRACKMONITOR (tracks 5—8)

Check which types of MIDI status (☞ see I /page 92) are present in each track

TRACKMONITOR → numeric key (tracks 1—4)

TRACKMONITOR → numeric key → numeric key (tracks 5—8)

〈MIDI monitor〉

Check which types of MIDI status are being received at MIDI IN

TRACKMONITOR → MIDI

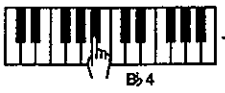
Check each type of MIDI status being received at MIDI IN

TRACKMONITOR → MIDI → numeric key

*Enter this function from the standby condition. Press STOP to return to the standby condition.

● Use Microscope mode to change the note display from ♯ to ♭

For example, if the song is in F major (one flat) and you enter "B♭ 4", the display will be as follows.



From the standby condition MICROSCOPE
↓
— — — — — — / — — A♯4 — — — MC-50 display
A♯4=B♭4(enharmonic)

When editing in Microscope mode, change the inappropriate ♯ display to ♭.
↓
STOP
↓
FUNC → 1 → 3 → ENTER
↓
Modify the enharmonic note display as appropriate for the key of the song (use the Alpha - dial).
↓
STOP
↓
MICROSCOPE
↓
Check the display again
↓
STOP

(例) Example: B flat major (two flats)
A♯→ B♭
D♯→ E♭

〈OTHER〉

● Successive playback of two or more songs

This section shows how to use SUPER - MRP to play two songs in succession.

〈Specify the song order, playback, and save to disk〉

1. Restart the SUPER - MRP system
(If necessary, save the song data in internal memory to disk.)

⬇
SUPER - MRC [Standby condition]
⬇
[SHIFT] + [MODE] → [4] → [ENTER]
⬇
[6] → [ENTER]
⬇
([ENTER])
⬇
[2] → [ENTER]
⬇
(Insert the song disk into the disk drive → [ENTER])
⬇
The display shows SUPER - MRP "MODE 1 PLAY"
⬇
[STOP]

2. Specify the song order and the pause settings
([SHIFT] + [MODE] → [2] →) → [ENTER]
⬇
[ENTER] The sequence number will blink
⬇
[ENTER]
⬇
Select the first song (use the Alpha - dial) → [ENTER]
⬇
Select the second song (use the Alpha - dial) → [PAUSE] Defeat pause ＊1, ＊2 → [ENTER]
⬇
"〔A〕- 3" blinks → move to sequence number (use [←]/[→]) "〔A〕- 1" (use the Alpha - dial)
⬇
[STOP]

3. Save your settings to floppy disk
[SHIFT] + [MODE] → ([2]) → [ENTER]
⬇
Set the floppy disk protect tab to WRITE, and insert it into the disk drive.
⬇
[SHIFT] + [SAVE] ＊3
⬇
Return the floppy disk protect tab to "PROTECT".

4. Playback
[SHIFT] + [MODE] → ([1]) → [ENTER]
⬇
The data will be read from the song disk
⬇
[PLAY]

5. Modify settings such as the song order, etc.

Modify settings such as the song order, etc.

[SHIFT] + [MODE] → ([2]) → [ENTER]
⬇
Modify the song order
(refer to 〔2. Specify the song order and the pause settings〕)
⬇
[SHIFT] + [SAVE] Save to floppy disk)

Restore the condition before settings were made

[SHIFT] + [MODE] → ([2]) → [ENTER]
⬇
The sequence number blinks to indicate the song data to be deleted (use [←]/[→])
⬇
[EDIT] → [2] → [ENTER] → [REC] → ••• Continue deleting
⬇
[STOP]
⬇
[SHIFT] + [SAVE]
(Save to floppy disk)

＊1: "▮▮" indicates a pause mark.
▮▮ ———— Pause setting (playback will stop)
▮ ———— Pause defeated (playback will continue)
Each time you press [PAUSE], "▮▮" and " ▮ " will alternate.
For this example, defeat the pause mark of the second song.

▮▮ [A - 1] ▮ [A - 2] → Continuous playback

＊2: It is also possible to make settings for Interval Time, Count In, Loop Play, etc. (☞ see II /page 175).

＊3: When you turn the power on and start up SUPER - MRP again, these settings will automatically be read into internal memory.

⑪ APPLICATION GUIDE

Refer to this material when you want to learn more advanced ways to take advantage of the MC - 50.

[Record a composition with more parts than you have MIDI sound modules]

When recording a song with a large number of parts, such as an orchestral ensemble, you may not have enough MIDI sound modules to play all the parts. In such cases, assign non - overlapping parts to a single sound module, and use Program Change messages to switch sounds. Parts which appear only in certain sections of the song (such as only in the introduction or ending) can be combined into a single part as long as they do not overlap. In this way, you can take full advantage of your MIDI sound modules (☞ see I /page 76).

Track 1	Piano		Strings	
Track 2	Bass			
Track 3	Violin 1			Electric piano
Track 4	Violin 2			E. Guitar
Track 5	Cello			
Track 6	Oboe			Sax
Track 7	Timpani			Orchestra hit
Track 8	Harp	Cemballo	Organ	Marimba

[Recording Program Change messages or Bender/ Modulation messages in a song]

The MC - 50 is able to record not only notes from the keyboard, but also other messages such as Program Changes. However it is not easy to select programs while you play the keyboard in realtime recording. In such cases, you can record Program Change data afterward.

The MC - 50's Quantize operation affects only the timing of Note messages. This means that when Quantize is used, the notes may become aligned with other messages such as Program Change or Bender/Modulation messages. In this case also, it may be helpful to first record only the notes in realtime, and quantize the track. Then, while listening to the track playback, you can record Program Change and Bender/Modulation messages on another track.

[Procedure]

① Record the notes as usual.
If necessary, use the Quantize operation to correct the timing.

② Record Program Change or Bender/Modulation messages on another track. While listening to the playback, press the program select buttons on your synthesizer, etc., or move the bender/modulation levers.

③ If the timing of the newly recorded data is correct, merge the two tracks into one track.

[Record sound module settings at the beginning of a song]

It is a good idea to record Program Change messages and/or exclusive messages, control change messages, etc. at the beginning of your song, so that when the song is played back, the correct sounds (and settings) will automatically be used. Even if you stop playback in the middle and then resume playing from the beginning, the sounds and settings will be correct.

○Program Change messages

These messages tell a MIDI sound module to switch to the specified sound (program number). Program Change messages simply specify a program number, not the actual sound data. This means that if the sound data in the specified memory of the sound module has changed since you recorded the song, the resulting playback will sound different.

○Exclusive messages

These messages are often used to specify the actual sound data for a MIDI sound module. Even if the sound data in the memory of the MIDI sound module has been modified since you recorded the song, the incoming Exclusive message will re - write the sound data memory to the same data that was used during recording. This guarantees that the correct sound data will be used, so that playback will sound exactly the same as when you recorded the song. This technique allows you to playback the song using a different MIDI sound module or synthesizer (of the same model type, of course). To record Exclusive messages, refer to the manual for your synthesizer. (For Roland synthesizers, refer to the explanation of Bulk Dump/Load.)

○Control Change messages

These messages specify sound generator settings such as volume, pan, or portamento. (☞ see Ⅰ /page 92)

＊If you connect other synthesizers or sound modules when playing back a song that contains these types of "sound module initialization" messages, remember that Exclusive messages can be received only by another device of the same type. Also, different models of synthesizer will have different sounds in each program memory, so that identically - numbered Program Change messages will select completely different sounds.

【Procedure】

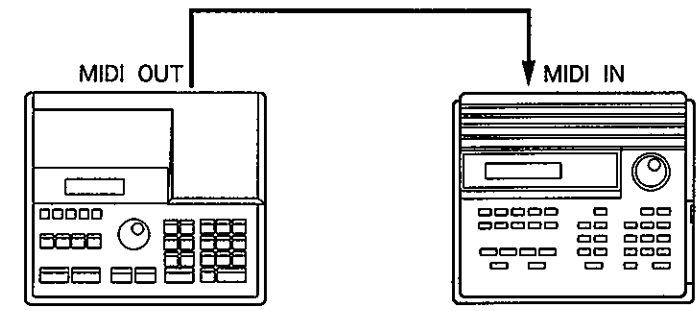
① Since we will input Program Change messages etc. in measure 1, begin recording the musical data from measure 2. (If the song begins after the first beat of the measure, it may be ok to begin recording from measure 1.)

② Use Mix Recording to record Program Change settings etc. into measure 1.

＊Some Exclusive messages may be too large to fit into measure 1. In this case, record a song which contains only Exclusive messages. To set up your sound module, playback the song containing only the Exclusive messages, and then playback the song containing the musical data.

[Transfer musical data from another sequencer]

It is possible to transfer musical data from another sequencer into the MC - 50. Make connections as follows.



Put the MC - 50 in recording mode, and playback the musical data from the other sequencer. If the other sequencer has a function corresponding to the MC - 50's Track Mute function, you can playback one part at a time and record it on its own MC - 50 track.
This method of transferring musical data is quick and easy, but has the disadvantage that the measure positions of the original data will not correspond with the measure positions of the data recorded in the MC - 50. By using the method explained below, you can synchronize the two sequencers to transfer data while preserving measure positions (☞ see II /page 22).

To transfer musical data between two synchronized sequencers, set the sequencer which is playing the data (the Master) to transmit MIDI Clock messages, and set the receiving MC - 50 (the Slave) to be controlled by MIDI Clock messages from an external device (☞ see II /page 62). (If you are transferring data from the MC - 50 to the other sequencer, make the opposite settings.)

When you transfer musical data with these settings, the slave device will follow the tempo of the master device, so you can raise the tempo for faster transfer.
However this method does not transfer tempo changes (i.e., tempo control data) which may have been programmed into the original data in the master. After you have recorded the data into the MC - 50, you will need to set the basic tempo, and record tempo change data into the tempo track.

If the timing resolutions of the master and slave sequencers are different, the timing of the recorded data will be forced into the resolution of the receiving sequencer. If you transfer data (especially realtime recorded data) from a sequencer with a high timing resolution into a sequencer with a low timing resolution, the notes of the resulting playback will sound as though they have been quantized, and Modulation or Bender messages will sound as though they were moving up or down a staircase.

＊Roland sequencers (MC - 50/300/500/500MK II , MT - 100, PR - 100) have a timing resolution of 96 clocks per quarter note.

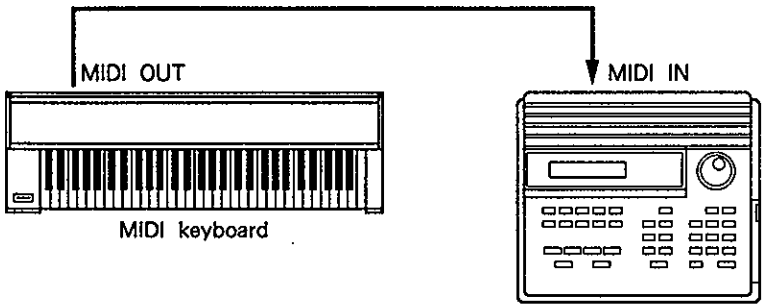
[Store synthesizer sound data on an MC-50 floppy disk]

Normally, the MC-50 is used as a sequencer, to record and playback musical data. However it is also possible to store sound data from a synthesizer onto the MC-50's floppy disk. Most synthesizers are able to transmit and receive sound data via MIDI as Exclusive messages. By recording these Exclusive messages from your synthesizer into the MC-50, and then playing them back from the MC-50 into your synthesizer, you can store and transfer synthesizer sound data. Remember that Exclusive messages are usually specific to each MIDI device, and can be received only by another MIDI device which uses the same parameters.

【Procedure】

① Use a MIDI cable to connect the MIDI OUT of the synthesizer or other device to the MIDI IN of the MC-50.

＊This is known as the One Way method. If you use two MIDI cables to connect the MIDI OUT to the corresponding MIDI IN of both devices (the Handshake method), data may not be transferred correctly.



② Make sure that the MC-50 setting "MIDI 2 RCV STATUS" is turned On so that Exclusive messages can be received. (Initially this will be turned On.) If it is turned Off, turn it On.

③ Begin recording on the MC-50, and when the measure display reaches 1 (M=1), transmit the Exclusive message from your synthesizer. (Refer to the manual for your synthesizer.)

Note!
Some synthesizers transmit very large Exclusive messages which the MC-50 may not be able to record completely.

[Create "effects" using only the MC-50 and sound modules]

The echoes that are heard when an instrument is played in a large room are often simulated using an effect device. Echoes are created using a Delay device. There are many other types of effect devices. Chorus, for example, adds depth to the sound.

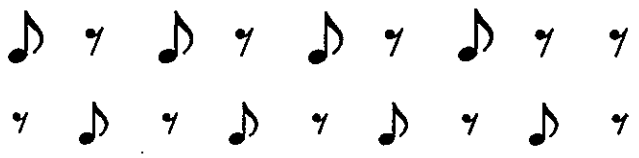
These effect devices process the actual "sound" in various ways. However, the MC - 50 can be used to simulate such effects by modifying the musical data that is transmitted to the MIDI sound modules or synthesizers. Here will explain how to use the MC - 50 with two or more MIDI sound modules to create delay (echo) and chorus effects.

【Delay】

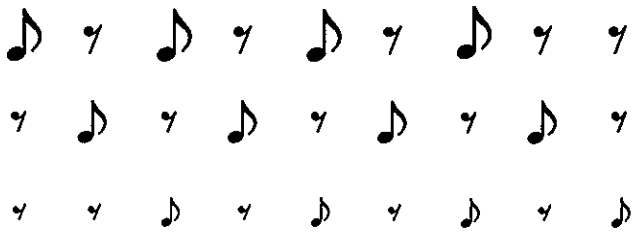
① Copy the musical data onto the same MIDI channel of another track.

② Using step edit etc., insert a rest at the beginning of the copied track. This will delay the track relative to the original track, simulating a single repeat echo.

③ Using microscope edit etc., reduce the velocities of the echoed notes. This will result in an echo effect with a single repeat.



④ To create a second repeat, copy the original musical data to another track, at step ② insert two rests, and at step ③ reduce the velocities even more. In this way you can create any desired number of repeats.



＊When creating rhythmic echoes using an external effect device, you will need to set the delay time to match the tempo of the song, and if the MC - 50 playback tempo changes, you will have to reset the delay time. However if you use the above method to create echo effects from the MC - 50 itself, the delay time will always be synchronized with the playback tempo.

【Chorus】

① Copy the musical data onto a different MIDI channel of another track.

② Adjust your two MIDI sound modules to slightly different tuning settings, and playback. This will produce a rich chorus effect. In general, you should set both of the MIDI sound modules to the same sound. However by programming slight differences in the filter or LFO of the two sounds, you can create very rich chorusing effects that would not be possible using conventional effect devices.

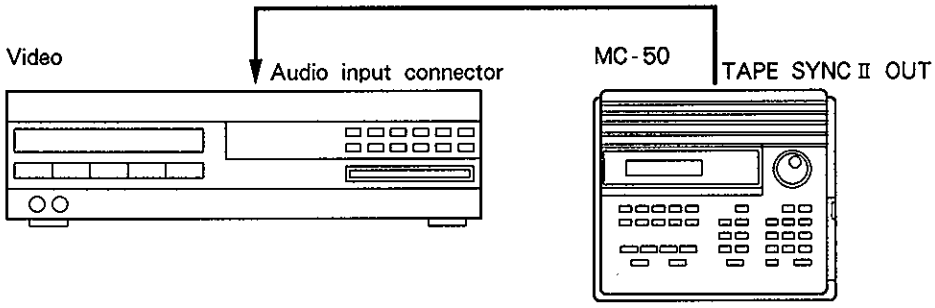
＊By combining these delay and chorus effects, you can create even more interesting sounds.

[Add sound effects during video editing]

If you have a hi - fi video that allows you to re - record the audio track afterward, you can record the MC - 50 tape sync signal in the audio track of the video tape. Then, play back the video tape as the master timing source, and use samplers and synthesizers controlled by the MC - 50 to add sound effects.

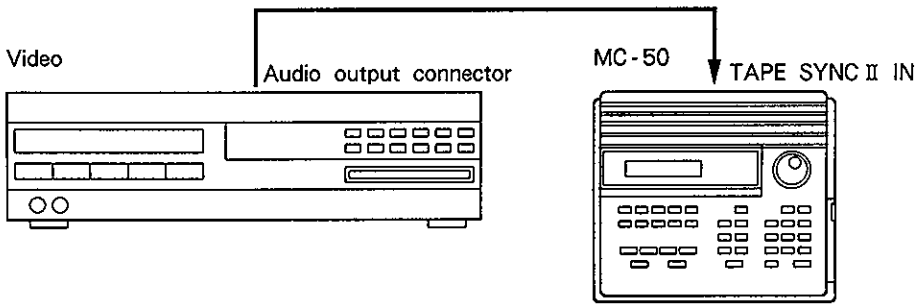
【Procedure】

① Set the MC - 50 sync clock to "INTERNAL", and use an audio cable (RCA pin ⟷ RCA pin) to connect the TAPE SYNC Ⅱ OUT connector to the audio input of the video recorder.



② Record the tape sync signal from the MC - 50 TAPE SYNC Ⅱ OUT onto either audio channel of the video tape.

③ Set the MC - 50 sync clock to "TAPE", and connect the audio output of the video recorder to the TAPE SYNC Ⅱ IN.



④ Set the MC - 50 in recording standby mode. When you start the video, recording will begin in synchronization with the video. Select the appropriate instrumental sounds (or sound effects) on your sampler or synthesizer, and play the keyboard.

When the tape sync signal ends, the MC - 50 will stop recording.

This completes the recording procedure. To playback the samplers or synthesizers in synchronization with the video, make the same settings as when you recorded, press [PLAY], and start the video.

For details on recording the tape sync signal and synchronized playback, refer to page 22—24 of Owner's Manual Ⅱ.

⑫ ABOUT MIDI STATUS

"MIDI status" refers to the type of MIDI message. The MC - 50 is able to handle all types of MIDI status, as explained below.

● Note messages (NOTE)

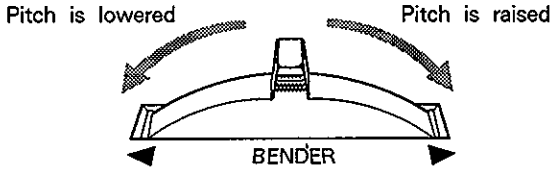
These messages carry musical performance information from a MIDI instrument. A Note On message tells which key was pressed (the Note number) and how strongly it was pressed (Velocity), and a MIDI Note Off message tells which key was released. Note numbers are expressed by a number 0—127, where 60 indicates middle C. The sound module will produce the appropriate pitch for the note number it receives, with higher note numbers resulting in higher pitches. Rhythm sound modules, however, usually have a different rhythm sound assigned to each note number, and the received note number will determine which rhythm instrument is sounded.

● Program Change messages (PG)

These messages select sounds. The MC - 50 can transmit Program Change messages to make a synthesizer, etc. automatically switch sounds. MIDI-equipped effects devices are also able to change effect settings in response to these messages.

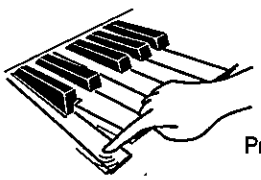
● Pitch Bend messages (PB)

Most synthesizers have a pitch bender (pitch wheel) located at the left of the keyboard. By moving this, you can transmit Pitch Bend messages to smoothly change the pitch while a note is sounding. Some devices are able to respond to Pitch Bend messages in other ways as well, but this will depend on the settings of the sound module.



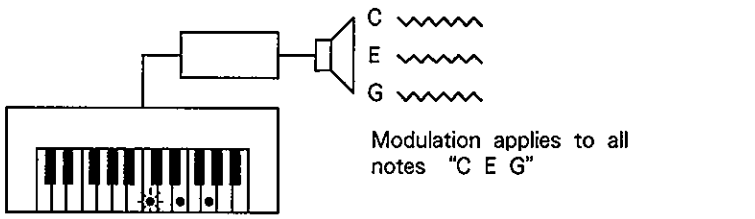
● Aftertouch messages (CAf/PAf)

Some synthesizers are able to transmit Aftertouch messages when you press down harder on the keyboard after playing a note, to modify the tone or volume. The settings of the sound module will determine the effect of Aftertouch messages.



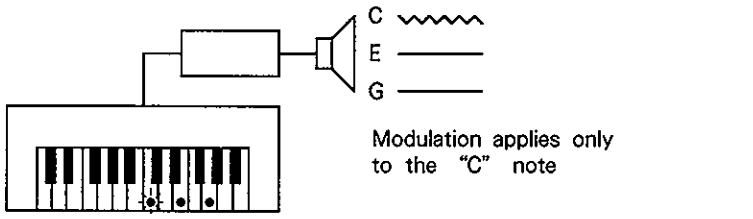
Pressing more strongly causes greater effect (change)

There are two types of aftertouch; **Channel Aftertouch** and **Polyphonic Aftertouch**.
Channel Aftertouch (CAf) affects an entire MIDI channel.



Press strongly on only the "C" note of the chord

Polyphonic Aftertouch (PAf) operates independently for each key (note).



Press strongly on only the "C" note of the chord

● Control Change messages (CC)

These messages allow you to make your musical performance more expressive by controlling aspects of the sound such as vibrato (cyclic change in pitch), tremolo (cyclic change in volume), hold (sustain the note; i.e., damper pedal), and pan (the stereo position of the sound). However, not all MIDI instruments are able to respond to all of these messages. Control numbers are numbered from 0 to 120 according to their function. (Not all numbers have been defined.) The way in which an instrument responds to each control number will depend on the device and the manufacturer.

● Exclusive messages (EX)

These messages are used mainly to transmit settings which are unique to a specific device, such as synthesizer parameter settings or sampler sound data, etc. We have mentioned earlier (see Ⅰ /page 9) that MIDI is a world-wide standard, but these Exclusive messages are an exception to this, and can normally be exchanged only between devices of the same type made by the same manufacturer. For this reason, each manufacturer of MIDI equipment has been assigned an Exclusive ID number, and Exclusive messages can be exchanged only between devices which are able to recognize this ID number. For details, refer to manual Ⅱ /page 188, "Roland Exclusive Messages".

● Tune Request message (TU)

This message requests analog synthesizers to perform their self-tuning function to set themselves to standard pitch. Most recent synthesizers produce their sound digitally, meaning that there is no possibility of pitch drift, and therefore do not respond to this message.

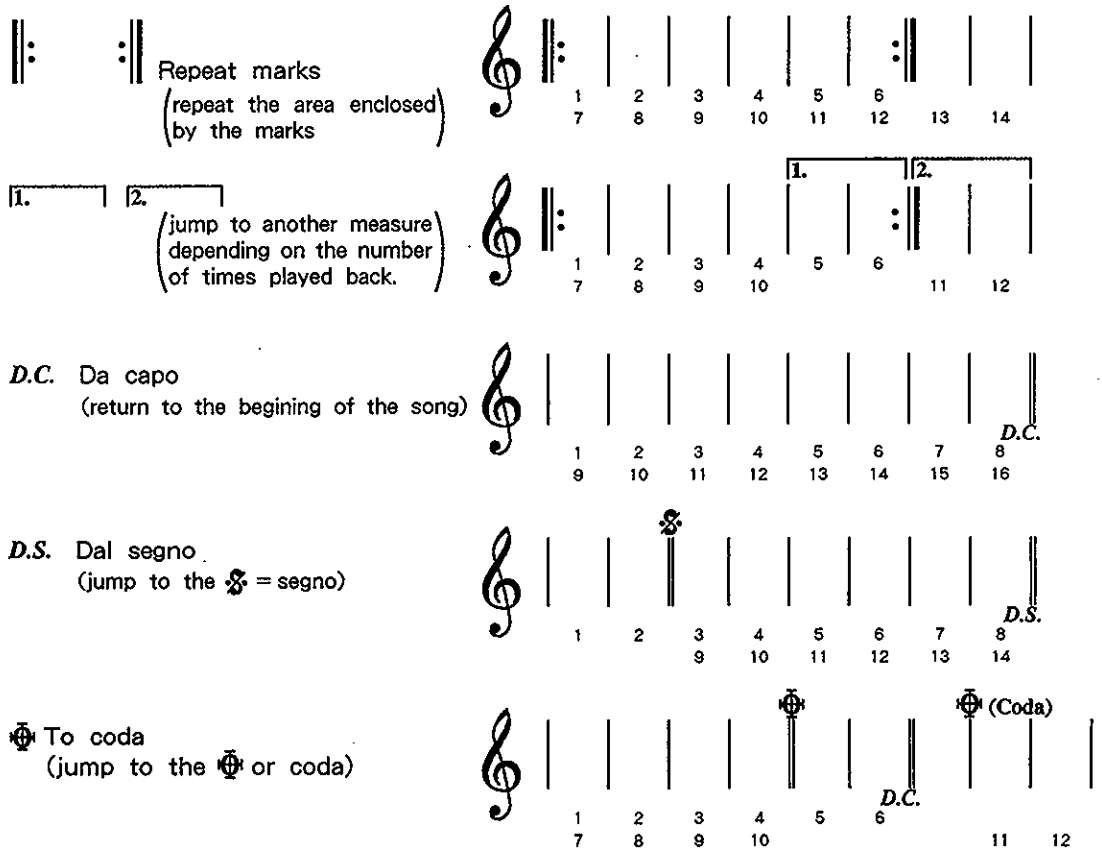
[13] READING MUSIC

How to read printed music.

Inputting printed music that contains repeat marks

Printed music often contains repeat marks such as D.C. (da capo) or D.S. (dal segno), telling you to jump to another measure. Since the MC - 50 is not able to automatically jump to a different measure and continue playback, you must input all measures just as you want them to be played back.

The Copy function is convenient when you need to input repeated phrases.



Various symbols used in printed music

Printed music uses a wide variety of symbols and abbreviations in addition to notes. Here are some of them.

8va	play (input) notes 1 octave higher than printed
8vb	play (input) notes 1 octaves lower than printed
𝄵	2/4 time
𝄴	4/4 time
𝄎	repeat the phrase of the previous beat
𝄏	repeat the phrase of the previous measure
𝄐	repeat the phrase of the previous two measures
𝄑	repeat the phrase of the previous four measures
col. A	play the same as section A
simile~	play the same as phrase ~ (play the same as another instrument)

Roland Corporation

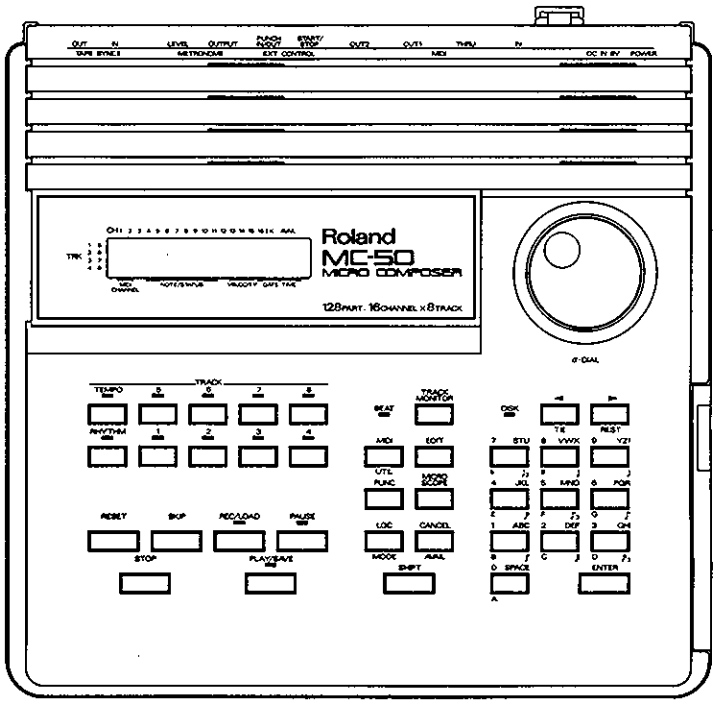
26045102 '95-9-AE2-42D

Roland

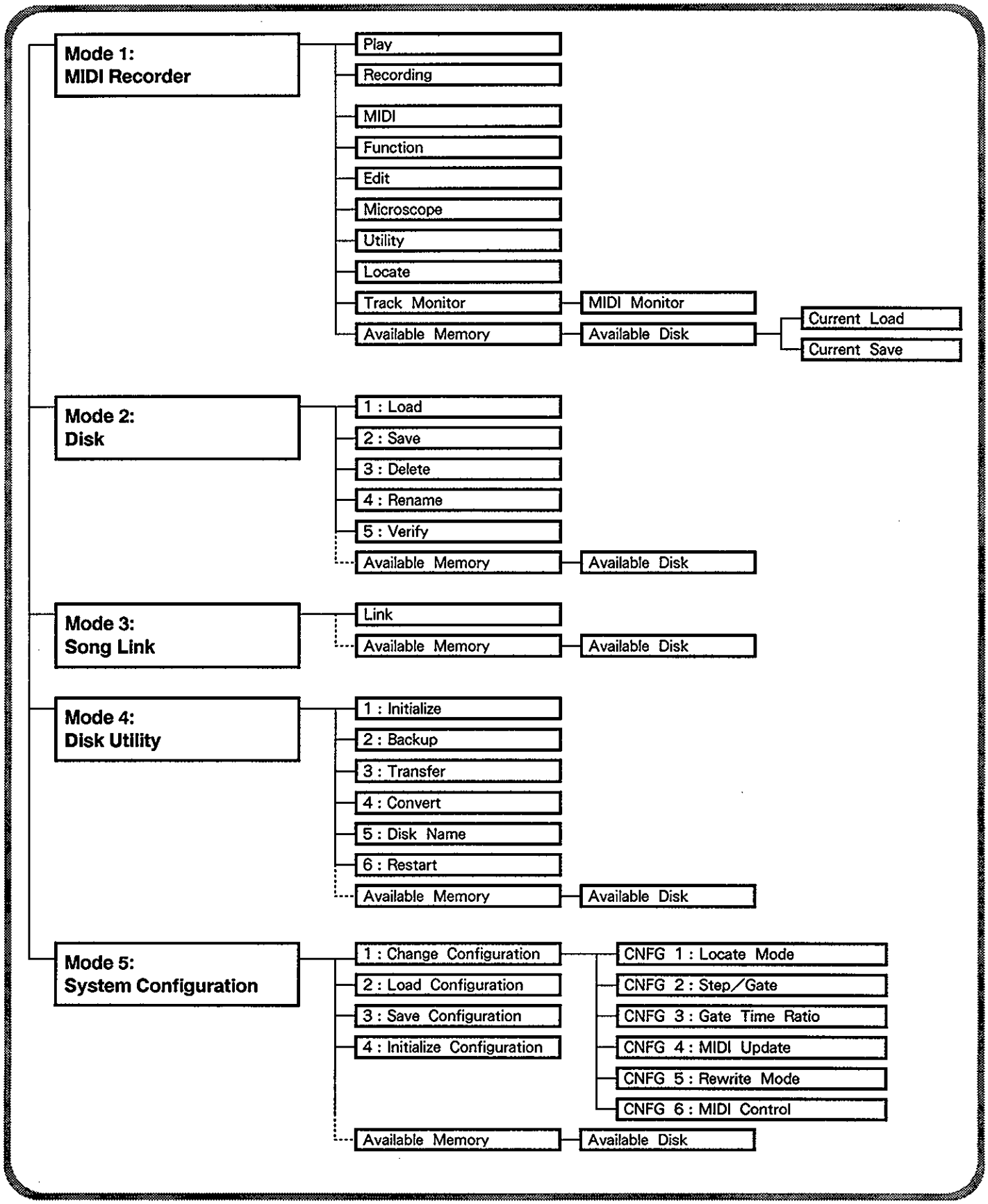
MICRO COMPOSER

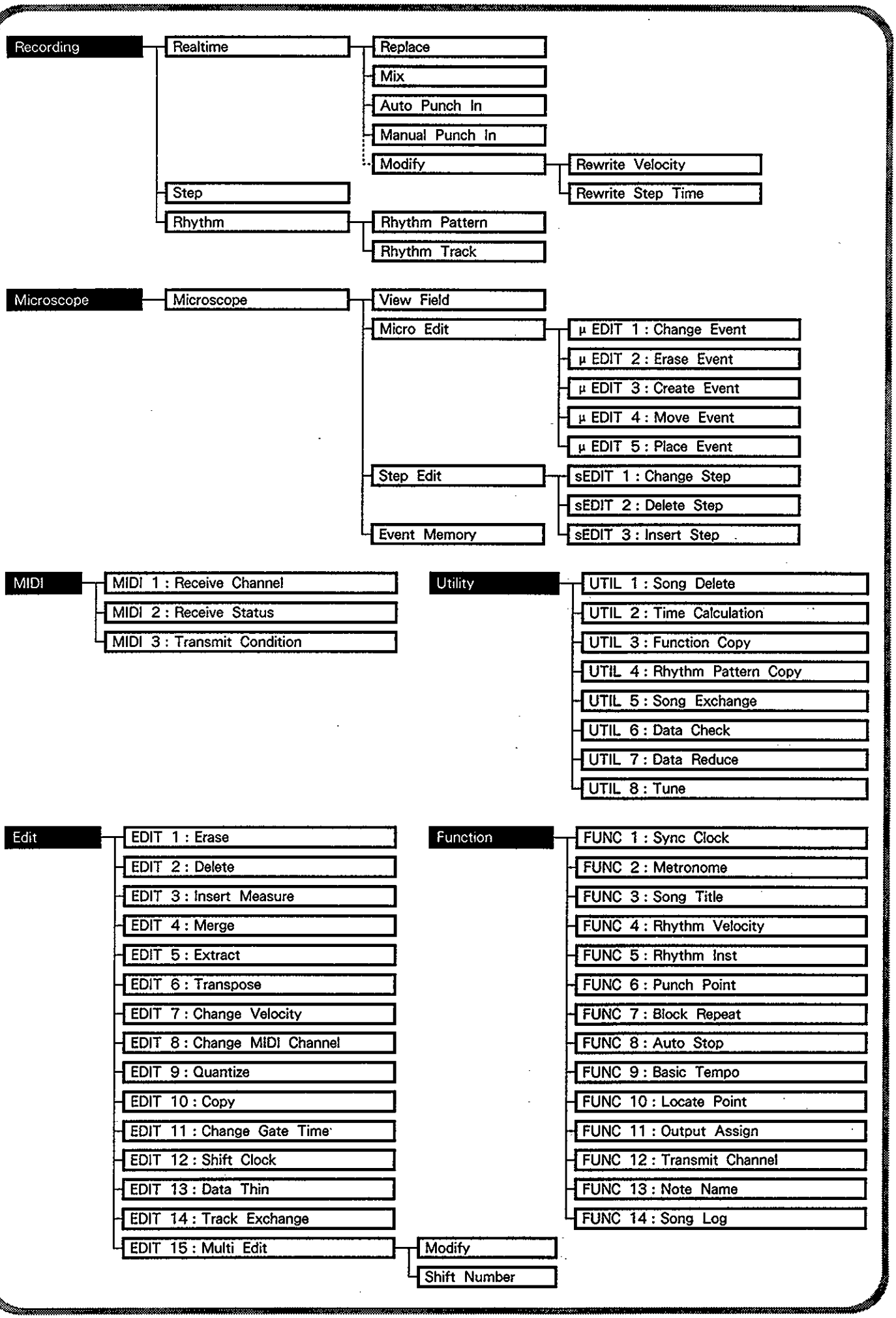
MC-50

Owner's Manual II
(REFERENCE)



MC-50 (SUPER-MRC)
OPERATION MAP

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Realtime
Replace
Mix
Auto Punch In
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Modify
Rewrite Velocity
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☐How to use this manual

The organization of this manual follows the structure of the MC - 50. The title of each item is as self - explanatory as possible, and an index of all functions is included at the end of this manual so you can quickly find the operation you need. If you are using the MC - 50 for the first time, please read through Owner's Manual I (USER'S GUIDE) to gain an understanding of its basic operation.

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SUPER - MRP (PERFORMANCE SYSTEM)

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About the MC-50

This section gives a general overview of the MC - 50 and how its data is organized.

1. SUPER - MRC and SUPER - MRP

The MC - 50 is a MIDI sequencer which contains the SUPER - MRC and SUPER - MRP system programs. These two system programs include new functions which have been added to the system programs of the MC - 500mk Ⅱ .

◆ **SUPER - MRC** is a system program that allows you to create and edit song data.

◆ **SUPER - MRP** is a system program that allows you to specify the playback order of songs created using the SUPER - MRC.

As with previous models in the MC series, the MC - 50 is able to use system programs loaded from other system disks. For example, you can use programs such as the MRB - 500 (bulk librarian) for managing MIDI sound module data.

2. Song Data

Song data consists of "tracks" containing musical data, and functions which determine how the song will be played. The MC - 50 can hold up to 8 songs in its internal memory.

◆ Phrase tracks (1—8)

You can record various types of MIDI messages in a Phrase track. Each Phrase track can record song data consisting of MIDI channels 1—16. As long as the MIDI channels are different, the same track can contain independent data for more than one song. Also, since song data is handled independently for each Phrase track, even MIDI messages of the same channel can be handled separately if recorded on different tracks. In this way, although the MC - 50 may appear to have only eight tracks, it has the functionality of 128 tracks (8 × 16).

The MC - 50 has two MIDI OUT connectors. For example, if tracks 1 and 2 each have 16 channels of song data, track 1 can be sent to MIDI OUT 1 and track 2 to MIDI OUT 2, for a performance using 32 MIDI sound modules.

◆ Rhythm track

The Rhythm track places previously prepared one - measure Rhythm patterns in the order in which they are to be performed. The Rhythm track does not contain the actual Rhythm pattern data itself, but only the numbers (pattern numbers) of the Rhythm patterns. This means that if you modify the Rhythm pattern settings, the performance will change.

The Rhythm track not only contains the drum performance, but also information on the length of the song and the time signature of each measure. This means that it is not possible to playback measures beyond the length of the Rhythm track. Be aware that if you edit the song data to make a Phrase track longer than the Rhythm track, the length beyond the end of the Rhythm track cannot be played back.

◆ Rhythm patterns

Rhythm patterns are created one measure at a time. 240 Rhythm patterns can created for each set of song data.

◆ Tempo track

The Tempo track records only changes in tempo. Use it when you want to change the tempo during a performance.

◆ Functions

Fourteen functions are provided, allowing you to specify how a song is played back or recorded, for example.

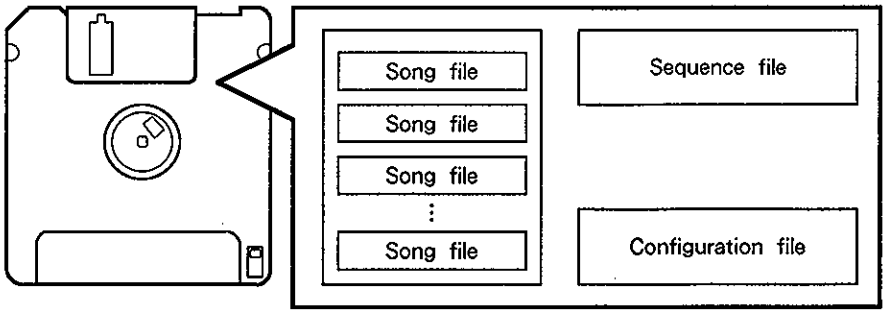
3. Data Handling

In addition to the song data explained above, the MC - 50 uses Configuration data and Sequence data.

◆ **Configuration data** specifies the environment in which you are using the MC - 50. In contrast to Functions, which specifies functions for each individual song, configuration data is common to all songs.

◆ **Sequence data** contains SUPER - MRP settings, and is not used with SUPER - MRC.

All this data will be lost when the power is turned off. If you wish to save it, you must write it to disk. Disks store this data in units called "**Files**". A disk can contain up to 108 Song files. Each disk also holds one Configuration file and one Sequence file. You can think of Configuration files and Sequence files as containing settings for all the Song files on a disk.



Sets of song data in MC - 50 memory are distinguished by **Song numbers**. There will be no problem even if two or more sets of song data have the same name. However, the Song Files on a disk are distinguished by song name (**Song title**). This means that it is not possible to store more than one Song File of a given Song Title on a single disk.

4. The five Modes of SUPER-MRC

The functions of SUPER - MRC are divided into five modes. Each mode is further subdivided.

◆ Mode 1: MIDI Recorder

Play	Play song data
Recording	Create song data
Available memory	Checks the amount of remaining internal/disk memory Save and load song data
MIDI	Specify how MIDI messages will be transmitted and received
Function	Set song functions
Edit	Edit/modify song data
Microscope	Check/edit/modify individual MIDI messages in song data
Utility	Edit entire song Convenient functions such as playing time calculation, etc.
Locate	Set/jump Locate points
Track monitor/ MIDI monitor	Monitor the song data Monitor the MIDI messages being received at MIDI IN

◆ Mode 2: Disk

Load	Load a song file from disk into MC-50 memory
Save	Save MC-50 memory onto disk
Delete	Delete a song file from disk
Rename	Change the name of a song file on disk
Verify	Compare song data in MC-50 memory with song data on disk

◆ Mode 3: Song Link

Combine two or more songs in MC - 50 memory into one song.

◆ Mode 4: Disk Utility

Initialize	Initialize a disk
Backup	Copy a disk
Transfer	Copy song files between disks
Convert	Convert MRC-500/300 song files for use with SUPER-MRC
Disk name	Name a disk
Restart	Start up a different system program from SUPER-MRC

◆ Mode 5: System Configuration

Change	Modify configuration data
Load	Load a configuration file from disk into the MC-50
Save	Save configuration data to disk
Initialize	Initialize the configuration data

5. Basic Operation

This section explains the basic key operations. For details, refer to the appropriate section.

☐When using the functions of mode 1

To select the functions of mode 1, press the appropriate key. To exit (or abort) the function, press [STOP]. It is not possible to move directly from one function to another function: you must first press [STOP], and then move to the other function.

Recording	[REC]
Available memory	Hold [SHIFT] and press [AVAIL]
MIDI functions	[MIDI]
Functions	[FUNC]
Edit functions	[EDIT]
Microscope	[MICROSCOPE]
Utility	Hold [SHIFT] and press [UTIL]
Locate functions	[LOC]
Track monitor	[TRACK MONITOR]
MIDI monitor	[TRACK MONITOR]→[MIDI]

When you select MIDI/Edit/Function/Utility, a menu will appear: select the desired function from the menu then and proceed.

☐Switching modes

To switch from mode 1 to another mode, use the following procedure:

① Move to the mode select display.
Hold [SHIFT] and press [MODE]

Mode number

② Select a mode number, and press ENTER.
Alpha - dial / Numeric keys [1]—[5]→[ENTER]

If you select a mode other than 2/4/5, you will get the menu display of that mode. Select the desired function from the menu display, and then proceed. To return from the function to the menu display, press [STOP].
To move to another mode, move to the menu display of that mode, and then hold [SHIFT] and press [MODE]. You will return to the mode select display.

☐ Basic key operations

Except for special operations, you will use the cursor keys ([◀][▶]), Alpha - dial, and Numeric keys to make various settings.

◆ Cursor movement

The blinking (or underlined) area of the display is called the "Cursor". Use [◀][▶] to move the cursor to the value of the item you wish to modify. For some functions, a single screen may not be able to display all the items. In such cases, move the cursor to select the next screen.

◆ Setting values

To set a value, use the Alpha - dial or the Numeric keys. In general, the Alpha - dial and Numeric keys work in the same way, and you may use either as you wish.

When you rotate the Alpha - dial to the right, the value will increase. When you rotate it to the left, the value will decrease. The value specified by the Alpha - dial is finalized as it is modified. However when selecting modes or functions, you must press [ENTER] to finalize the value.

The Numeric keys work differently depending on the value you are modifying.
In general, after modifying a value with the Numeric keys, press [ENTER] to finalize the value. If the modified value has not been finalized, the value will blink alternately with "+". If you select another item or function before finalizing the value, it will return to the previous, unmodified value. To finalize the value, press [ENTER]. To return to the previous value, press [CANCEL].

Number	Directly specify the number. To make the value positive (+), hold [SHIFT] and press Numeric key [8]. To make the value negative (−), hold [SHIFT] and press Numeric key [7].
Item	The item will change successively from [0].
Name (alphabet)	You can enter the alphabetical characters printed on the numeric keys. Each time you press a button, you will cycle through the characters. To enter lower case characters, hold [SHIFT] and press a Numeric key.
Notes	Press the appropriate Numeric key as indicated by the note mark printed on the lower right of the key.

When making editing settings etc., you can press the Numeric key [0] to specify values such as all MIDI channels (ALL), all tracks (ALL), all Phrase tracks (1—8), or the last measure (END).
You can also use the Numeric keys while holding [SHIFT] to specify special values.

＊You can also use the Track keys to select tracks for various settings.

PLAY

This chapter explains how to start up SUPER-MRC, how to playback, and various convenient functions for playback.

SUPER-MRC Startup and Standby

☐Starting up SUPER-MRC (method 1)

When you turn the power on, the following displays will appear.

Initial display

```
MC-50 SUPER-MRC
Recording System
```

➡ after a short time

Standby display

```
SONG  1
M=    1   ♩=120   REAL
```

☐Starting up SUPER-MRC (method 2)

When SUPER-MRC is started up, it will load the specified song file from the song disk into MC-50 memory. In order to automatically read in a song file, you must specify an "auto load filename" in the configuration file on the song disk.

* To set an auto load filename, refer to "Mode 5: Save" (☞P.164).

① Turn the MC-50 power on, and insert a song disk while the initial display is displayed.
When SUPER-MRC starts up, the song file (and configuration file) will be read into the MC-50.

☐Starting a system from a system disk

You can start up a system program from a system disk (such as the separately sold MRB-500 Bulk Librarian, etc.) by turning the power on.

* To start up another system program (SUPER-MRP, system disk) while SUPER-MRC is running, refer to "Mode 4: Restart" (☞P.153).

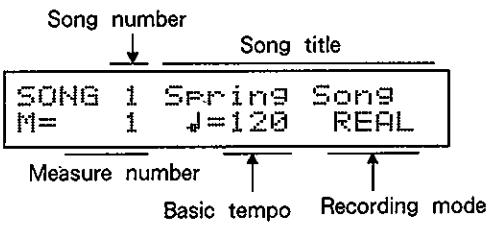
① Hold Numeric key [3] and turn the power on.

② Insert system disk, and press [ENTER].

☐The standby display

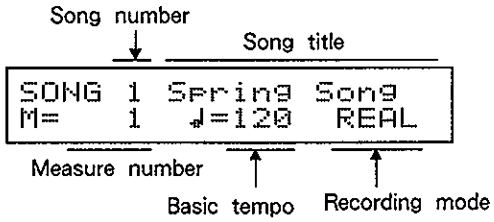
When SUPER-MRC is started up, the standby display will appear. The standby display is the basic display from which you begin various operations. If the MC-50 is in the standby display and is not playing, this is known as the **Standby condition**.

The standby display shows the following settings.



Play

☐ Basic play operations



Start playback	[PLAY]
Pause playback/start playback from the paused location	[PAUSE]
Stop playback	[STOP]
Stop playback and return to the first measure	[RESET]

◆ In the standby condition, use [◀][▶] to move the cursor (blinking) to the Song number / Measure number / Basic tempo / Recording mode, and use the Alpha - dial (or Numeric keys → [ENTER]) to modify the value.

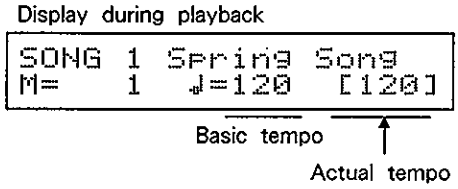
◆ When you stop playback on a location other than a measure boundary, a "+" mark will be displayed at the right of the measure number.

◆ You can connect a pedal switch (DP - 2, etc.) to the START/STOP jack to start and stop the MC - 50 each time the pedal is pressed.

* Notes that are sounding when you press [PAUSE] will continue sounding.
* To automatically stop at a point you specify, set "FUNC 8: Auto stop" (☞P.70).
* If you want the MC - 50 to stop at next of the measure in which you pressed [STOP], set "CNFG 1: Locate mode" (☞P.156).

☐ Tempo

Each song is played according to its displayed Basic tempo (and the tempo in the Tempo track).
During playback, the Basic tempo and the actual tempo will be displayed. If tempo data has not been recorded in the Tempo track, both of these values will be the same. If tempo data exists, the tempo will change around the value of the displayed Basic tempo.



The Basic tempo can be temporarily changed in the standby condition or during playback. If you select another song, the Basic tempo of that song will be selected.

< Temporarily modifying the Basic tempo >

Use [◀][▶] to move the cursor to Tempo, and use the Alpha - dial (or the Numeric keys → [ENTER]) to modify the tempo. To return to the Basic tempo, hold [SHIFT] and rotate the Alpha - dial.

< Setting the Basic tempo of a song >

The Basic tempo can be set for each song, and is initially set to 120. To modify this value, refer to "FUNC 9: Basic tempo" (☞P.71).

☐Moving between measures

Use the [◀][▶] to move the cursor to the measure number, and use the Alpha - dial(or Numeric keys →[ENTER]) to specify the measure number.

< Key functions >

Move to the last measure	[SKIP]
Move to the first measure	[RESET]
Move to the next measure	Hold [PAUSE] and press [SKIP]
Move to the previous measure	Hold [PAUSE] and press [RESET]

☐Playback track on/off

The indicator of each track key will light to indicate tracks which contain song data. When you press a key which is lit, the indicator will go out, and song data of that track will no longer be transmitted from MIDI OUT. If you turn the Tempo track off, the song will be played back at the displayed Basic tempo.

☐Song selection

Use [◀][▶] to move the cursor to the song number, and use the Alpha - dial(or Numeric keys →[ENTER]) to specify the song number.

To select a song number which contains no song data, use the Numeric keys to select the song number, and then hold [SHIFT] and press [ENTER]. Once you have selected a song number, it can be selected in the same way as song numbers which contain song data.

< Key functions >

Select the next song number	Hold [SHIFT] and press [SKIP]
Select the previous song number	Hold [SHIFT] and press [RESET]

☐Special playback

◆ Block repeat play (continue playback over a specified area)
Hold [SHIFT] and press [PLAY].

＊Specify the area of repetition in "FUNC 7: Block repeat" (☞P.69).

◆ Quadruple speed playback (upper limit: tempo 500)
Hold [PLAY] and press [▶].

◆ Quarter speed playback (lower limit: tempo 5)
Hold [PLAY] and press [◀].

☐ Other functions

◆ If notes on a MIDI sound module are stuck, you can turn them off by holding
Hold [STOP] and press [MIDI].

◆ If you want the changing messages (except for note messages) in the area over which you moved to be output from MIDI OUT, hold [PAUSE] and press [MIDI].(If you simply move to a different measure, messages in the song data you skipped over will not be transmitted from MIDI OUT. For example, if the area you skipped contains a Program Change message, the MIDI sound module would not be set to the appropriate program. In such cases, you can use this function to ensure that when playback begins from the new location, the settings of the MIDI sound module will be correct.)

*If you wish to automatically transmit any changes in song data (except for Note messages) which precede the point newly moved to in response to a Song Position Pointer message, refer to "CNFG 4: MIDI update" (☞ P.159).

■ Locate Functions

□ Explanation

Locate points contain data (measure, beat, clock) to specify a position. In standby condition or microscope display, you can use the Locate Jump function to move quickly to a previously specified Locate point.
Locate points are also used when specifying the area or position for various functions.

Locate points are handled as numbers 0—9. You can freely set your own Locate point for numbers 1—8.

Locate number	Type of Locate point	Remarks
0	System Locate point	This is set automatically where recording begins.
1—8	User Locate point	These can be set at any location in the song.
9	System Locate point	This is set automatically where recording ends.

* Locate points are renewed each time they are set.
* To name a Locate point or set a Locate point by specifying individual measure/beats, refer to "FUNC 10: Locate point settings" (☞P.72).
* To use the Locate Jump function to move to the beginning of the measure of a Locate point, refer to "CNFG 1: Locate mode" (☞P.156).

□ Locate point settings

● From the standby condition / play condition / microscope display

① Move to the position where you wish to set a Locate point.

② Select the Locate Point setting display.
[LOC] → [REC]

```
JUMP : LOC1
M=  10  ♩=120  REAL
```

Locate number

```
SET  : LOC1
M=  10  ♩=120  REAL
```

③ Select a Locate number, and execute.
(Alpha - dial / Numeric keys) → [ENTER]

□ Locate jump

● From the standby condition / microscope display

① Select the Locate display.
[LOC]

Locate number

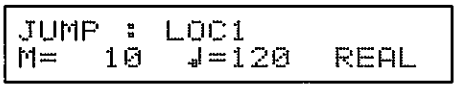
```
JUMP : LOC1
M=  10  ♩=120  REAL
```

② Select a Locate number, and execute.
(Alpha - dial / Numeric keys) → [ENTER]

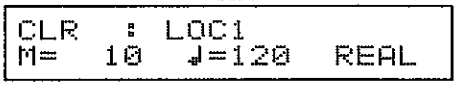
☐ Locate point delete

● From the standby condition

① Select the Locate Point delete display.
LOC → Hold SHIFT and press REC



Locate number



② Select a Locate number, and execute.
(Alpha - dial / Numeric keys) → ENTER

Checking Song Data (Track Monitor)

Explanation

The track monitor graphically indicates the type and channel of MIDI messages being transmitted from each Phrase track.

In the track monitor display, you can specify the MIDI messages to be displayed.

Numeric key input	Display	MIDI message
0	PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
1	CC	Control Change 0—120
2	PG	Program Change
3	CAf	Channel Aftertouch (Channel Key Pressure)
4	PB	Pitch Bend
5	EX	Exclusive
6	TU	Tune Request
7	MOD	Channel Mode messages
9	NT	Note

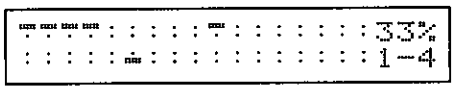
Procedure

● From the standby condition

① Select the Song number you wish to check.

② Select the Track Monitor display.

[TRACK MONITOR]

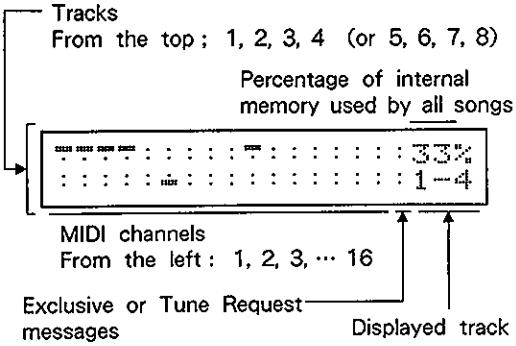


③ Select the MIDI message and tracks you wish to monitor.

Numeric keys [0]—[7], [9] (select MIDI message)

[TRACK MONITOR] (select the tracks)

To switch the displayed tracks (1—4, 5—8), press [TRACK MONITOR]. When all MIDI messages are being displayed, the percentage of data usage will be displayed, but if you have used the Numeric keys to select a specific type of MIDI message, the name of the selected MIDI message will be displayed. To return to the display of all MIDI messages, press [TRACK MONITOR] once again.


Tracks
From the top : 1, 2, 3, 4 (or 5, 6, 7, 8)
Percentage of internal memory used by all songs
33%
1-4
MIDI channels
From the left : 1, 2, 3, ··· 16
Exclusive or Tune Request messages
Displayed track

● To exit the track monitor, press [STOP].

■ Checking MIDI Messages from MIDI IN

(MIDI Monitor)

☐ Explanation

The MIDI monitor graphically indicates the type and channel of MIDI messages being received from MIDI IN.

In the MIDI monitor display, you can specify the type of MIDI messages to be displayed.

Numeric key input	Display	MIDI message
0	PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
1	CC	Control Change 0—120
2	PG	Program Change
3	CAf	Channel Aftertouch (Channel Key Pressure)
4	PB	Pitch Bend
5	SYS	System messages
6	TU	Tune Request
7	MOD	Channel Mode messages
9	NT	Note

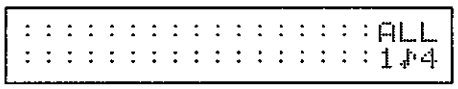
*The MIDI monitor function displays all MIDI messages from MIDI IN, regardless of the Receive status settings (☞P.57).

☐ Procedure

● From the standby condition

① Select the MIDI Monitor display.

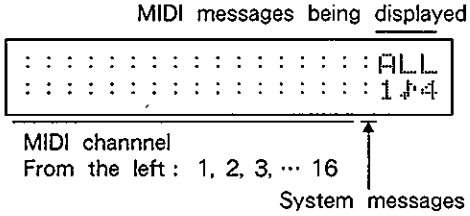
[TRACK MONITOR] → [MIDI]



② Select the MIDI message you wish to monitor.

Numeric keys [0] — [7], [9]

If all MIDI messages are being monitored, the display will show "ALL", but if you have used the Numeric keys to select a specific type of MIDI message, the name of the selected MIDI message will be displayed. To return to the display of all MIDI messages, press [TRACK MONITOR].



When a MIDI message is received, a note mark will appear in the upper line of the display. If you have selected System messages (SYS), the following MIDI messages will be displayed starting from the left.

	MIDI message
1	F0 (Beginning of Exclusive)
2	F1 (MIDI Time Code Quarter Frame)
3	F2 (Song Position Pointer)
4	F3 (Song Select)
7	F6 (Tune Request)
8	F7 (End of Exclusive)

	MIDI message
9	F8 (MIDI Clock)
11	FA (Start)
12	FB (Continue)
13	FC (Stop)
15	FE (Active Sensing)
16	FF (System Reset)
17	Exclusive

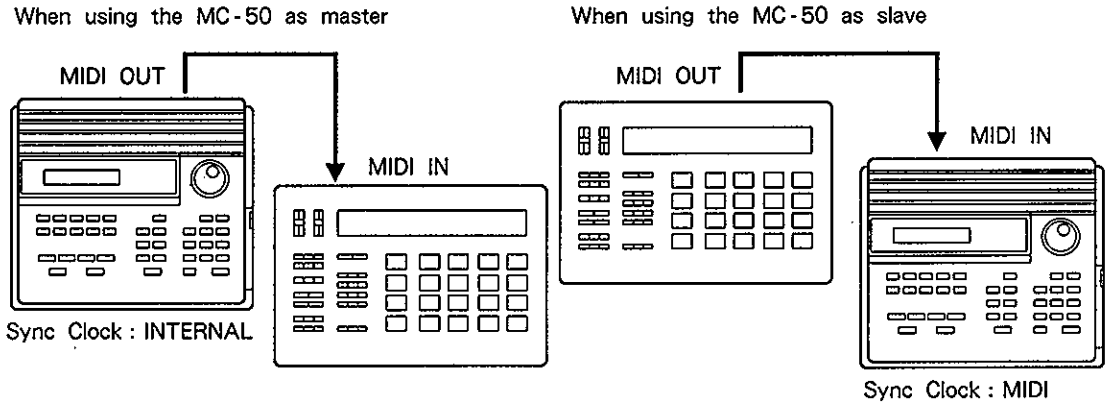
● To exit the MIDI monitor, press [STOP].

Synchronized Playback (MIDI Sync / Tape Sync)

In addition to playing MIDI sound modules, the MC - 50 is able to playback in synchronization with other MIDI devices such as sequencers, rhythm machines, or with multitrack tape recorders.

☐ When synchronizing the MC - 50 with other MIDI devices

It is possible to playback the song data of the MC - 50 in synchronization with the song data of other sequencers or rhythm machines. In such cases, you must decide which device will control the other device. In general, the controlling device is called the **Master**, and the device being controlled is called the **Slave**. Set the master to transmit MIDI clocks (synchronization signals), and set the slave to receive MIDI clocks.



When you operate the MC - 50 to begin playback, it will transmit MIDI clocks according to the tempo. Since the MC - 50 is operating on its own clock, it will ignore any MIDI clocks it receives.When using the MC - 50 as slave, set sync clock (☞P.62) to "MIDI". When "MIDI" is selected, playback will begin when a Start message and MIDI clock is received from MIDI IN.

＊When using other connected devices as slaves, refer to their operating manuals.

In addition to MIDI clock, the MC - 50 recognizes the following messages.

MIDI message	Function
Start	Start from the beginning of the song
Continue	Start from the middle of the song
Stop	Stop playback
Song Position Pointer	Move the playback position of the song
Song Select	Select a song

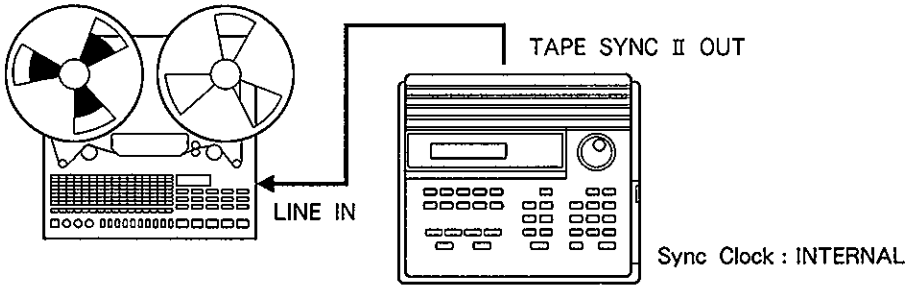
＊Song Position Pointer is a message which specifies the position from the beginning of the song. When you move to another measure on the master device, the slave device will move to the same position. This message is able to specify a position in the range of 1—1024 measures (4/4 time).

☐ Controlling the MC-50 by a multitrack recorder

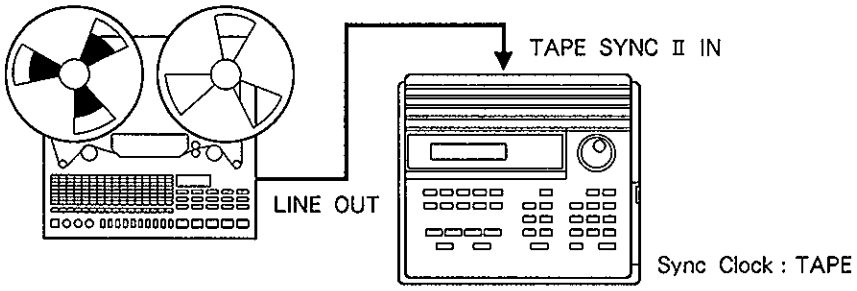
It is possible to make the MC - 50 playback in synchronization with a multitrack recorder (MTR). In this case, use the MTR as the master and the MC - 50 as the slave. In order to synchronize the MC - 50 to the MTR, you must first record a tape sync signal (FSK signal) on an unused track of the tape. A tape sync signal is output from the TAPE SYNC II OUT jack when the MC - 50 is played back, so record this tape sync signal on the MTR to which you want to synchronize the MC - 50.

The tape sync signal of the MC-50 includes data to specify the position in the song. This means that even if you start MTR playback in the middle of the song, the MC - 50 will automatically move to the same location and begin playing back. This is labeled "TAPE SYNC II " to avoid confusion, since the tape sync signal of previous MC-series models did not contain position-specifying data.

When recording the tape sync signal to MTR



When synchronizing the MC-50 to the MTR



To synchronize the MC-50 to an MTR, set the sync clock (☞P.62) of the MC - 50 to "TAPE". Playback will begin when a tape sync signal is received from the TAPE SYNC II jack.

* Do not use equalization or noise reduction when recording/playing back the tape sync signal on the MTR. Doing so can cause problems. If the MTR is designed so that noise reduction is permanently on, use the same settings for recording and playback.

☐Record the tape sync signal on the MTR

Make connections as explained on the previous page, and set the sync clock to "INTERNAL" for the song you wish to synchronize.

① Adjust the recording level of the MTR.

When the MC - 50 is in standby condition, it will output a pilot signal that will change to the sync signal when playback begins. Adjust the recording level of the pilot signal to about − 10— − 3 VU.

② Start recording on the MTR.

③ After recording 5—10 seconds of the pilot signal, start the MC - 50 and record the sync signal.
[PLAY]

＊Be sure to start from the beginning of the song. If you start from the middle, synchronized playback will not be possible.

④ When the MC - 50 finishes playing back, wait 5—10 seconds and stop recording on the MTR.

☐Playback the MC-50 in synchronization with the MTR

Make connections as explained on the previous page, and set the sync clock to "TAPE" for the song you wish to synchronize.

① Start the MTR.

② Put the MC - 50 in standby condition.
[PLAY]

If you start playback from the pilot signal, synchronization will begin immediately from the beginning of the song. If you start playback from the middle, it will take a bit of time for the MC - 50 to synchronize and begin playback.

When the tape sync signal stops, the MC - 50 will stop playback.

＊If the MC - 50 does not synchronize correctly, press [STOP] and then press [PLAY] once again. If it still does not synchronize correctly, re-record the tape sync signal.

＊If you wish to synchronize the MC - 50 to a tape signal recorded by the MC - 500/300 or MC - 500mk Ⅱ, be sure to start from the pilot signal. The MC - 50 will not operate if you start from the middle of the song.

RECORDING

This section explains how to record Song data. There are various ways of recording each type of track, as follows.

Phrase Track (1—8)

- Realtime Recording
  - Replace Recording
  - Mix Recording
  - Auto Punch In Recording
  - Manual Punch In Recording
  - Modify Recording
    - Rewrite Velocity
    - Rewrite Step Time
- Step Recording

Rhythm Track

- Rhythm Pattern
- Rhythm Track

Tempo Track

- Replace Recording

■ Before Recording

This section explains recording methods for the various tracks.

□ Phrase track (1—8) recording

There are two main ways to record a Phrase track; realtime recording and step recording.

The following MIDI messages can be recorded in a Phrase track.

Note on (Velocity)	Channel Aftertouch (Channel Key Pressure)
Note off	Pitch Bend
Polyphonic Aftertouch (Polyphonic Key Pressure)	Local on/off
Control Change	Exclusive
Program Change	Tune Request

< Realtime recording >

In realtime recording, the actual performance of an external MIDI device (MIDI keyboard, etc.) is recorded as MIDI messages. You can select from the following recording methods.

◆ Replace recording

When recording on each Phrase track for the first time, you will normally select Replace recording. If the track which you are recording contains song data, all song data on that track will be rerecorded.

◆ Mix recording

If song data exists on the track you are recording, the newly recorded data will be added to that song data without erasing it.

◆ Auto punch in recording

Use this when you wish to rerecord the song data of a previously specified area.

◆ Manual punch in recording

Use this when you wish to rerecord the song data over the area you specify using a pedal switch.

◆ Modify recording

Modify recording is a special way of recording that allows you to rerecord only the velocities (or Step times) of each note message in the Phrase track.

*To rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). Or, if you do not wish to record a specified type of MIDI message, set "MIDI 2: Receive status" (☞P.57).

< Step recording >

Step recording allows you to enter note messages (MIDI channel / Step time / Note number / Velocity / Gate time) one by one. If you wish to enter MIDI messages other than note messages one by one, use the Microscope function.

☐ Tempo track recording

The Tempo track records only tempo change data. If tempo data already exists, that tempo data will be rerecorded. To input tempo data you can either use the Alpha - dial / Numeric keys, or MIDI messages from an external device. It is also possible to record tempo data just as it comes from an external device (MIDI clock, tape sync signal).

* The setting of "Mode 5: MIDI control" (☞P.161) determines which MIDI message will be used to record the Tempo track. Tempo data is handled without regard to MIDI channel, so any MIDI channel can be used. However, the setting of "MIDI 1: Receive channel" (☞P.56) will apply.
* When the MC - 50 is being controlled by an external device for synchronized playback, the tempo data in the Tempo track is ignored.

☐ Rhythm track recording

The one - measure Rhythm patterns you have previously created are arranged in the Rhythm track in the order of playback. The Rhythm track does not contain the Rhythm pattern data itself, but only the numbers of the Rhythm patterns (the pattern numbers). This means that if you later change the Rhythm pattern settings, the performance will be different.

Rhythm patterns are created one measure at a time. They can be recorded either by inputting notes one at a time, or by recording a performance from a drum pad or keyboard. Up to 240 Rhythm patterns can be created for each song. Rhythm patterns can contain only note messages. If you wish to use messages other than note messages, record them in a Phrase track on the MIDI channel being received by your MIDI rhythm sound module.

< Relation to other tracks >

A song is played back in accordance with the time signature of each Rhythm pattern arranged in the Rhythm track, and the number of Rhythm patterns determines the length of the song. This means that it is not possible to playback a measure for which there is no Rhythm pattern. However, when recording a Phrase track (or the Tempo track), recording is possible even if Rhythm patterns have not yet been arranged in the Rhythm track. This is because rest patterns are automatically arranged in the Rhythm track.

If Rhythm patterns are not arranged in the Rhythm track, you will specify the time signature of the rest patterns when recording a Phrase track. Also, even if Rhythm patterns have been arranged, you can specify the time signature when you record from a measure for which there is no Rhythm pattern.

When recording a Phrase track from a measure which has a Rhythm pattern, rest patterns of the same time signature as the last Rhythm pattern will automatically be filled in if you record beyond the last Rhythm pattern.

In this way, the Rhythm track is an important track which determines the time and length of the song data.

■ Replace Recording (Phrase Track / Tempo Track)

☐ **Explanation** This section explains how to use Replace Recording on a Phrase track or the Tempo track.

◆ Replace recording on a Phrase track (1—8)

When you first record a Phrase track, you will normally select Replace recording. If song data exists on the track you are about to record, this will rerecord all song data on that track.

*If you want to rerecord only a specified MIDI channel of song data, set "MIDI 1: Receive channel" (☞P.56). If you want a specific channel of MIDI messages to not be recorded, set "MIDI 2: Receive status" (☞P.57).

◆ Replace recording on the Tempo track

The Tempo track records only tempo change data. If tempo data already exists, that tempo data will be rerecorded.
To control the tempo, you can use either the Alpha - dial / Numeric keys (PANEL) or MIDI messages from an external device (MIDI). To select the MIDI message which will control the tempo, set "Mode 5: MIDI control" (☞P.161). (Initially, note numbers will control tempo.)
It is also possible to record tempo data (MIDI clock, tape sync signal) just as it is received from an external device.

When using MIDI messages from an external device to control the tempo, the tempo can be controlled in the following ways by each type of message.

MIDI message	Tempo change
NOTE # (Note number) 36 (C2)—84 (C6)	Higher note numbers will make the tempo faster. To select the Basic tempo, play Note number 60 (C4). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—484. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
VELO (Velocity) 1—127	Higher velocity will make the tempo faster. To select the Basic tempo, play a note with a velocity of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
CC (Control Change) the value 0—127 of any one control number	Higher values will make the tempo faster. To select the Basic tempo, transmit a value of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.
PB (Pitch Bend) −128—+128	As the pitch is raised the tempo will become faster, and as the pitch is lowered the tempo will become slower. To select the Basic tempo, move the pitch bender to the center position (0). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.

*Tempo data will change the tempo relative to the Basic tempo of the song.
*Tempo messages are handled without regard to the MIDI channel, and can be recorded using MIDI messages of any MIDI channel. However, the setting of "MIDI 1: Receive channel" (☞P.56) is valid. If you have set this to a setting other than "ALL", make sure to match the specified receive channel.

< Start recording >

There are two ways to start recording; Count In and Key On.

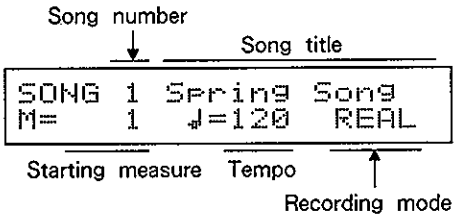
Count In start	A count-in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC-50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

☐ Replace recording a Phrase track

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, and Recording mode (REAL).

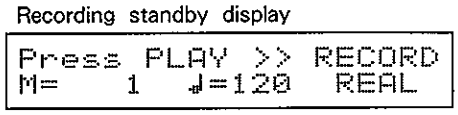
[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the values)
[ENTER] (finalize the values)

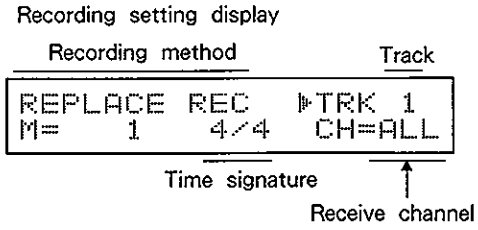


*If you wish to select a song number for which no song data exists, hold [SHIFT] and use the Alpha-dial, or use the Numeric keys to select the song number and then hold [SHIFT] and press [ENTER].

② Select the Recording setting display, and select the Recording method (REPLACE) and Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the values)
[◄][►] (move the cursor)
[ENTER] (finalize the values)
Track keys (select the track)





*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

*The Recording setting display and the standby display will alternate each time you press [REC].

③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)
[REC] → [PAUSE] (Key On Start)

*If you have selected Key On Start, you can press [PLAY] to begin recording without a count in.

④ Stop recording.

[STOP]

☐ Replace recording for the Tempo track

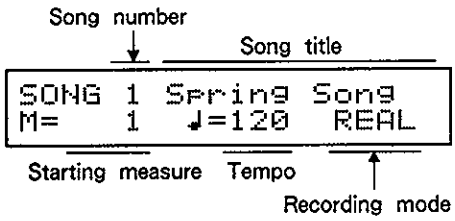
If you are using MIDI clock from an external device to record tempo data, set Sync Clock (☞P.62) to "MIDI". If you are using a tape sync signal from a multitrack recorder to record tempo data, set the sync clock to "TAPE".

*When recording tempo data with the MIDI clock on the external MIDI device, do not transmit the exclusive messages from external device, as the correct tempo may not be recorded. Turn the transmission of exclusive messages from the external MIDI device off, or turn the reception of exclusive messages off (☞P.57 "MIDI 2: Receive Status").

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, Recording mode (REAL).

[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

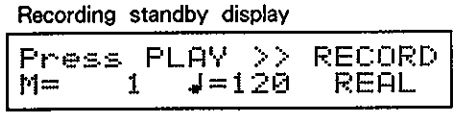


*If you wish to select a song number which contains no song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

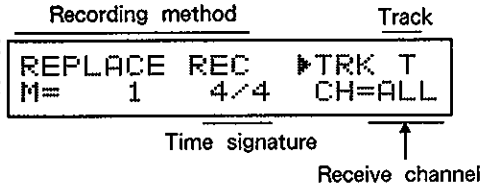
② Select the Recording setting display, and select Tempo track (T), and the Tempo control method (PANEL or MIDI).

[REC]→[REC]→
Alpha - dial / Numeric keys (modify the value)
[◄][►] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display 1

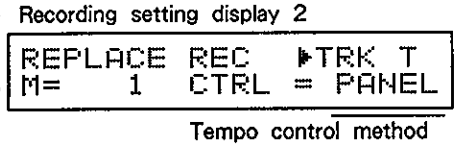


*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

*If you are recording tempo data received from an external device, it will not be possible to select the "Tempo control method".

*The Recording setting displays and the standby display will alternate each time you press [REC].

Recording setting display 2

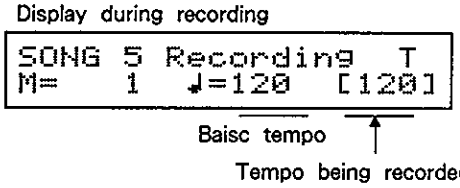


③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

Display during recording



*If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

< Tempo recording using the Alpha - dial / Numeric keys >

Normally, you will record using Count In Start. If you are using Key On Start, press [PLAY] to record. (Recording will not begin even if you change the tempo.)

< Tempo recording using a specified MIDI message >

You may use either starting method.

< Tempo recording of tempo data received from an external device >

Recording will begin when you start playback on the external MIDI device (or multitrack recorder).

④ Stop recording.

[STOP]

■ Mix Recording (Phrase Track)

☐ Explanation

When song data exists in the track you are recording, that song data will not be erased, but the newly recorded data will be added to the previous song data. Use this method when adding song data to a track which already contains song data.

< Recording start methods >

To start recording, you can either use Count In or Key On.

Count In start	A count-in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC-50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

*If you want to record only a specified MIDI channel of song data, set "MIDI 1: Receive channel" (☞P.56). If you want a specific channel of MIDI messages to not be recorded, set "MIDI 2: Receive status" (☞P.57).

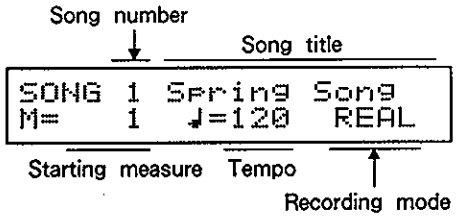
*Do not perform mixed recording if exclusive messages are stored in the track to be recorded.To record over tracks where exclusive messages are stored, record into an empty track first, and then use the Merge function (☞P.84).

☐ Procedure

● From Mode 1 standby

① Select the Song number / Starting measure, Tempo, Recording mode (REAL).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

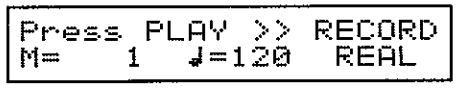


*If you wish to select a song number which contains no song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

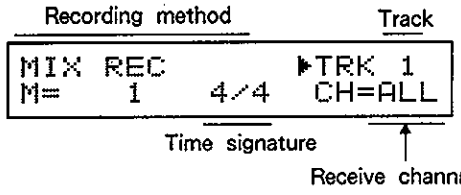
② Move to the Recording setting display, and select the Recording method (MIX REC) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◀][▶] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display



*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

*The Recording setting display and the standby display will alternate each time you press [REC].

③ Select the Recording standby display, and begin recording. (When recording begins, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

* If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

④ Stop recording.

[STOP]

Auto Punch In Recording (Phrase Track)

Explanation

This rerecords a previously specified section of the song data. Make settings in "FUNC 6: Punch point" (☞P.68) to specify the section to be rerecorded. When you use Auto Punch In Recording, the area outside the specified section will be played back and not recorded. When the specified section is reached, the MC - 50 will automatically enter Replace Recording mode.

* It is not possible to use Auto Punch In Recording on a track which has not been previously recorded.
* If you want to rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). If you want a specific type of MIDI message not to be recorded, set "MIDI 2: Receive status" (☞P.57).

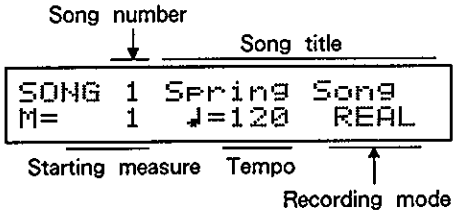
Procedure

● From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

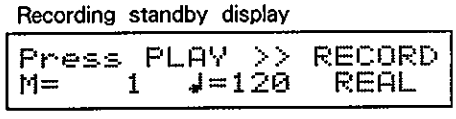
* Set the starting measure to a measure before the punch in point.

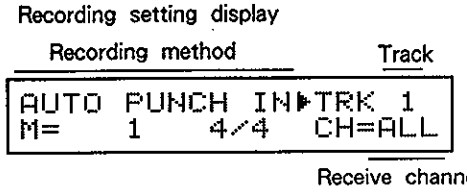


② Move to the Recording setting display, and select the Recording method (AUTO PUNCH IN) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◀][▶] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

* The Recording setting display and the standby display will alternate each time you press [REC].





③ Move to the Recording standby display, and start.

[REC] → [PLAY] (Count In Start)

When you enter the recording section, the REC indicator will change from blinking to lit, and recording will begin.

* "Hanging notes" may occur by preessing [STOP] to cancel recoding. In this case, pressing [STOP] again while holding down [MIDI] will correct the problem.

④ When the recording section ends, stop recording.

[STOP]

■ Manual Punch In Recording (Phrase Track)

☐ Explanation

You can rerecord a specific section of song data using a pedal switch (DP - 2, etc.) connected to the PUNCH IN/OUT jack. When you use Manual Punch In Recording, you will playback without recording until you press the pedal. Press the pedal at the point where you wish to begin rerecording, and you will begin Replace Recording. Press the pedal once again and you will stop recording and will return to playback mode. Since the playback/recording modes will alternate each time you press the pedal, you can rerecord several sections if desired.

* It is not possible to to use Manual Punch In Recording for a track on which nothing has been previously recorded.
* If you want to rerecord only the song data of a specific MIDI channel, set "MIDI 1: Receive channel" (☞P.56). If you want a specific type of MIDI message not to be recorded, set "MIDI 2: Receive status" (☞P.57).

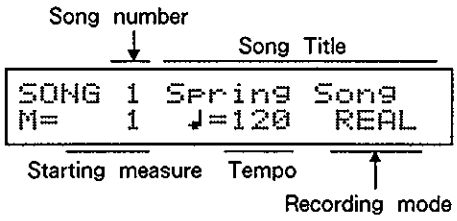
☐ Procedure

● From Mode 1 standby

① Connect a pedal switch (DP - 2, etc.) to the PUNCH IN/OUT jack.

② Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

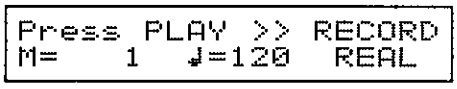


* Set the starting measure to a measure before the section you wish to rerecord.

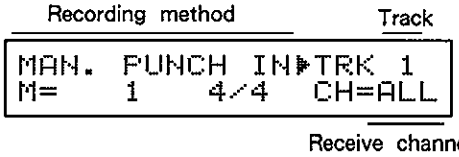
③ Move to the Recording setting display, and select the Recording method (MAN. PUNCH IN) and the Phrase track.

[REC] → [REC] →
Alpha - dial / Numeric keys (modify the value)
[◀][▶] (move the cursor)
[ENTER] (finalize the value)
Track keys (select the track)

Recording standby display



Recording setting display



* The Recording setting display and the standby display will alternate each time you press [REC].

④ Move to the Recording standby display, and start.

[REC] → [PLAY] (Count In Start)

* "Hanging notes" may occur by preessing [STOP] to cancel recoding. In this case, pressing [STOP] again while holding down [MIDI] will correct the problem.

⑤ Press the pedal at the location where you want to begin rerecording. When you press the pedal once again, you will return to playback mode.

While data is being recorded, the REC indicator will change from blinking to lit.

⑥ Stop recording.

[STOP]

■ Modify Recording (Rewrite Velocity / Rewrite Step Time)

☐ Explanation

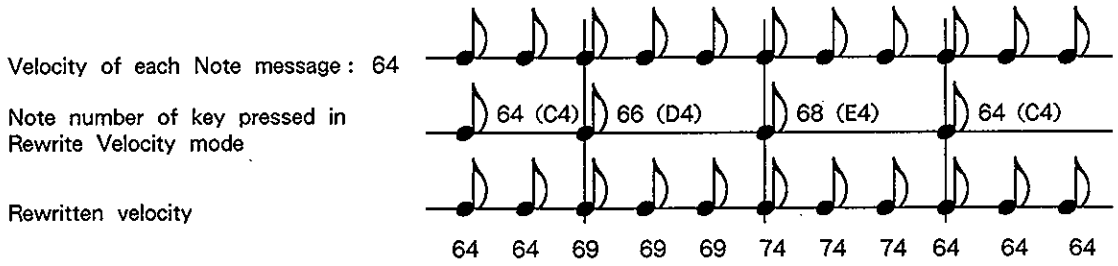
Modify Recording is a special way of recording that allows you to rerecord the velocity or Step time of each Note message recorded in a Phrase track.

◆ Rewrite Velocity

This allows you to correct the Velocity of each Note message recorded in a Phrase track, while playing.

For example, you could step record all notes at a certain velocity, and later use Modify Recording to add variation to the velocity. If the Phrase track contains song data of two or more MIDI channels, use "MIDI 1: Receive channel" (☞P.56) to specify the MIDI channel of the song data for which you want to rewrite the velocity.

Use "Mode 5: MIDI control" (☞P.161) to select the MIDI message you will use to rewrite velocity. If this has not been set, you can use note numbers 36 (C2)—84 (C6) to change the velocity. For example, when you press the C4 key, the velocity of the next note will be changed to 64. The velocity of subsequent notes will also be changed to 64 until you press another key. In this way, press a key only for those notes whose velocity you wish to modify.


Velocity of each Note message : 64
Note number of key pressed in Rewrite Velocity mode
Rewritten velocity
64 (C4)
66 (D4)
68 (E4)
64 (C4)
64 64 69 69 69 74 74 74 64 64 64

You can select one of the following types of MIDI message to use for rewriting velocity.

MIDI message	Velocity change
NOTE # (note number) 36 (C2)—84 (C6)	As the note number increases, the velocity will increase. Range of change : 4—124
VELO (velocity) 1—127	As the velocity increases, the velocity will increase. Range of change : 1—127
CC (control change) The value of any one control number 0—127	As the value increases, the velocity will increase. Range of change : 1—127
PB (pitch bend) −128—+128	As the pitch is raised, the velocity will increase above 64. As the pitch is lowered, the velocity will decrease below 64. (Pitch bend 0 = velocity 64). Range of change : 1—127

◆ Rewrite Step time

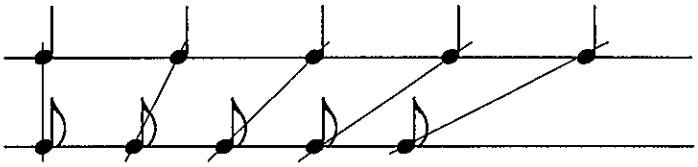
This allows you to rewrite the Step time (the time until the next note) or Gate time of each Note message recorded in a Phrase track, while playing.

For example, you could step record with a specific Step time, and then use Modify Recording to modify the Step time / Gate time / Velocity of each Note message. In this way it is possible to first specify only the pitch of each note, and later rewrite the Step time / Gate time / Velocity.

You can also set "Mode 5: Rewrite mode" (☞P.160) so that Gate time / Velocity are not rewritten.

Step Time of each Note message : 96

Step Time after modification by Rewrite Step Time : 48



*Do not rewrite song data that contains chords recorded in Realtime Recording. Since the notes of a chord recorded in Realtime Recording may not be recorded at precisely the same timing, rewriting the Step time would spread out the notes in each chord.

*The Rewrite Step Time function will rewrite the Step time of all Note messages of all MIDI channels in the specified Phrase track, regardless of the setting of "MIDI 1: Receive channel" (☞P.56). Also, all MIDI messages other than Note messages will be erased.

< Ways to start recording >

You can start recording by Count In or by Key On.

Count In start	A count-in will begin two measures before recording begins. When the begin position is reached, recording will begin. During the count the MC-50 will be in playback mode.
Key On start	When a Note or Hold (control number 64) message is received, recording will begin.

☐ Rewrite Velocity procedure

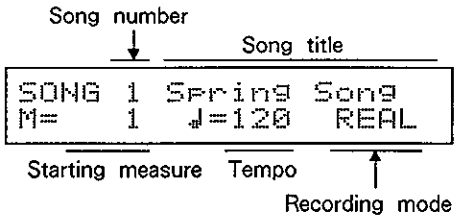
● From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

◀ ▶ (move the cursor)

Alpha - dial / Numeric keys (modify the value)

ENTER (finalize the value)



② Move to the Modify Recording setting display, and select "REWRITE VELO" and the Track.

Hold SHIFT and press REC → REC →

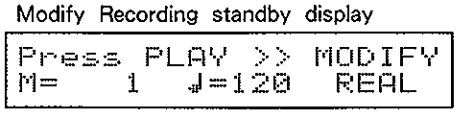
Alpha - dial / Numeric keys (modify the value)

◀ ▶ (move the cursor)

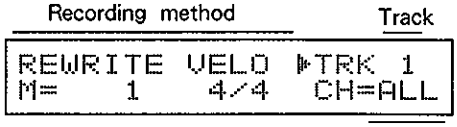
ENTER (finalize the value)

Track keys (select the track)

Modify Recording standby display



Modify Recording setting display



*The Modify Recording setting display and the standby display will alternate each time you press REC.

③ Move to the Modify Recording standby display, and start recording. (When you enter recording mode, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

*To modify the velocity of the starting point, use Key On Start.

*If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

*Until you transmit the specified MIDI message, velocity values will be rewritten to 64.

④ Stop recording.

[STOP]

☐Rewrite Step Time procedure

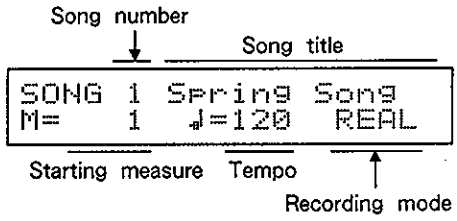
●From Mode 1 standby

① Select the Song number / Starting measure you wish to rerecord, and select the Tempo and Recording mode (REAL).

[◀][▶] (move the cursor)

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



② Move to the Modify Recording setting display, and select "REWRITE STEP" and the Track.

Hold [SHIFT] and press [REC] → [REC] →

Alpha - dial / Numeric keys (modify the value)

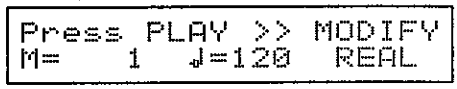
[◀][▶] (move the cursor)

[ENTER] (finalize the value)

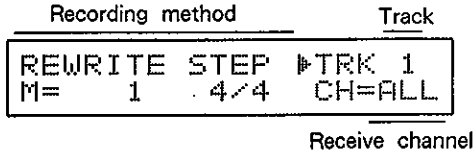
Track keys (select the track)

*The Modify Recording setting display and the standby display will alternate each time you press [REC].

Modify Recording standby display



Modify Recording setting display



③ Move to the Modify Recording standby display, and start recording. (When you enter recording mode, the REC indicator will change from blinking to lit.)

[REC] → [PLAY] (Count In Start)

[REC] → [PAUSE] (Key On Start)

*If you wish to place a note at the starting point, use Key On Start.

*If you have selected Key On Start, you can press [PLAY] to begin recording without a count.

④ Stop recording.

[STOP]

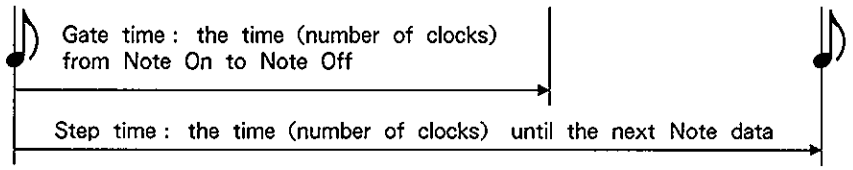
Step Recording

Explanation

Step Recording allows you to enter note data (MIDI channel / Note number / Velocity / Gate time) one by one. If a MIDI keyboard is connected, you can press keys to enter MIDI channel / Note number / Velocity / Gate time.
If song data already exists in the track you are step recording, notes you enter will successively replace the previous notes in the track.

* To enter MIDI messages other than Note data one by one, use the Microscope function (☞P.109).
* Step Recording allows you to record any MIDI channel, regardless of the Receive Channel setting (☞P.56). However, the Receive Channel setting will determine the MIDI messages passed on by the Soft Thru function, so normally you will set the Receive Channel to "ALL".

< Step time and Gate time >



If you input the Step time using the Note symbols, the Gate times will be as shown below. If you input the Step time as a number, the Gate time will be 75% of the Step time. Of course, you can modify the Gate time later, regardless of the Step time you originally input.

Note symbol	Step time	Gate time
𝅘𝅥𝅯	6	4
𝅘𝅥𝅯	12	9
𝅘𝅥𝅯₃	16	12
𝅘𝅥𝅯	24	19
𝅘𝅥𝅯₃	32	26
𝅘𝅥𝅯	48	41
𝅘𝅥₃	64	56
𝅘𝅥	96	86
𝅗𝅥	192	178

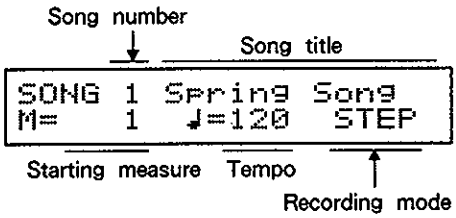
* To change the Step time and Gate time of each Note symbol, refer to "Mode 5: Step/Gate" (☞P.157).
* To change the Gate time ratio used when you input the Step time as a number, refer to "Mode 5: Gate Time Ratio" (☞P.158).

☐ Procedure

● From Mode 1 standby

① Select the Song number / Starting measure you wish to record, and select the Tempo and Recording mode (STEP).

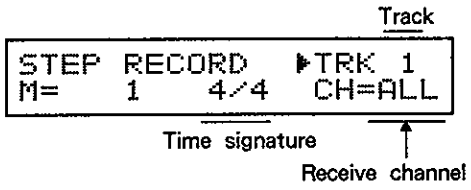
◀ ▶ (move the cursor)
Alpha - dial / Numeric keys (modify the value)
ENTER (finalize the value)



*To select a song number which does not contain song data, hold SHIFT and use the Alpha - dial, or use the Numeric keys to select a song number and then hold SHIFT and press ENTER.

② Move to the Recording setting display, and select the Phrase track.

REC →
Alpha - dial / Numeric keys / Track keys (select the track)
→ ENTER (finalize a value)

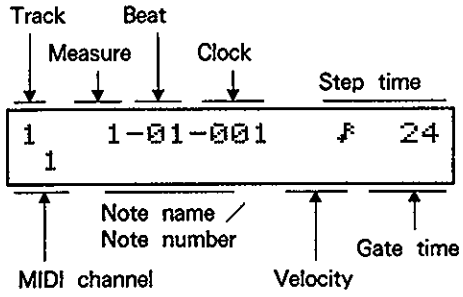


*If a Rhythm pattern does not exist for the measure at which you start recording, such as when you are making a new recording or extending the length of the song data, you must also specify the time signature.

③ Move to the Recording display, and specify the Note data.

Alpha - dial / Numeric keys (modify the values)
◀ ▶ (move the cursor)
ENTER (finalize a value)

When you finalize the Gate time, you will move to the next step. Repeat this procedure to input Note data.



< Step time input >

When a Note symbol is displayed, rotating the Alpha - dial will change the Note symbol. When specifying by number, use the Numeric keys. When you change the display to number, the Alpha - dial will change the number. When using the Numeric keys to specify Note symbols, hold SHIFT and press a Numeric key.

< MIDI keyboard input >

By pressing a key on your MIDI keyboard, you can input MIDI channel / Note number / Velocity all at once. The displayed Step time will be used, and the Gate time will be the value corresponding to that Step time.

< If you make a mistake >

You will move back one step each time you press RESET. Move back to the wrong note and correct the value. All notes you backed over will be deleted.

④ Stop recording.

STOP

☐ Inputting chords

Here's how to input two or more notes at the same location, such as chords.

< Input from the panel >

When you press [PAUSE] (the Pause indicator will light), the position will be fixed, and will not advance to the next step when a note is entered. After you have entered the notes of the chord, press [PAUSE] once again to return to normal operation.

＊If you hold [SHIFT] and press [ENTER] when finalizing the Gate time, chord input will be defeated.

< Input from a MIDI keyboard >

◆Press [PAUSE], and play the chord. After you have input the notes, press [PAUSE] once again.

◆Press each note in the chord without taking your finger off each key until all keys have been pressed. When you release the keys, you will advance to the next step.

◆If you are using a MIDI keyboard which is able to control Hold, play the notes in the chord while pressing the Hold pedal. (If desired, you may release each key after playing it.) After you have played each note in the chord, release the Hold pedal, and you will advance to the next step.

☐ Inputting rests

There are two ways in which to enter a rest; by inputting Rest data, or by simply entering a blank (no data) and moving to the next step. If you enter a rest, you will be able to check the Step time of the rest when using the Microscope function.

◆To enter Rest data, specify the Step time of the rest, move the cursor to the note number, hold [SHIFT] and press Numeric key [9] (displayed as "CH.REST"), and press [ENTER]. To return from the "CH.REST" display to the Note Number display, use the Numeric keys to enter a note number.

◆To enter a blank (no data), specify the Step time until the next Note data, and hold [SHIFT] and press [▶].

＊It is also possible to use [TRACK MONITOR] instead of [SHIFT] to enter a rest.

＊If you wish to reduce the amount of data in a song, you can use "UTIL 7: Data reduce" (☞ P.133) to convert Rest data into blanks (no data).

☐ Inputting ties

Each time you hold [SHIFT] and press [◀], the Step time / Gate time of the previous Note data will be lengthened. The Step time will be lengthened by the amount of the first Step time. The Gate time will be the value of the current Step time added to the first Gate time.

Hold [SHIFT] and press [◀]
Once again, hold [SHIFT] and press [◀]
Step time : 48
Gate time : 41
Step time : 96
Gate time : 89
Step time : 144
Gate time : 137

＊This operation is not possible after you have input a rest, or after you have pressed [RESET] to move back to the previous step.

＊You can also use [TRACK MONITOR] instead of [SHIFT] to enter ties.

☐ To stop MIDI message reception during recording

If you want to play the keyboard without recording, you can press [MIDI] to temporarily stop MIDI reception. (The REC indicator will blink.) To return to normal, press [MIDI] once again.

Rhythm Pattern Recording

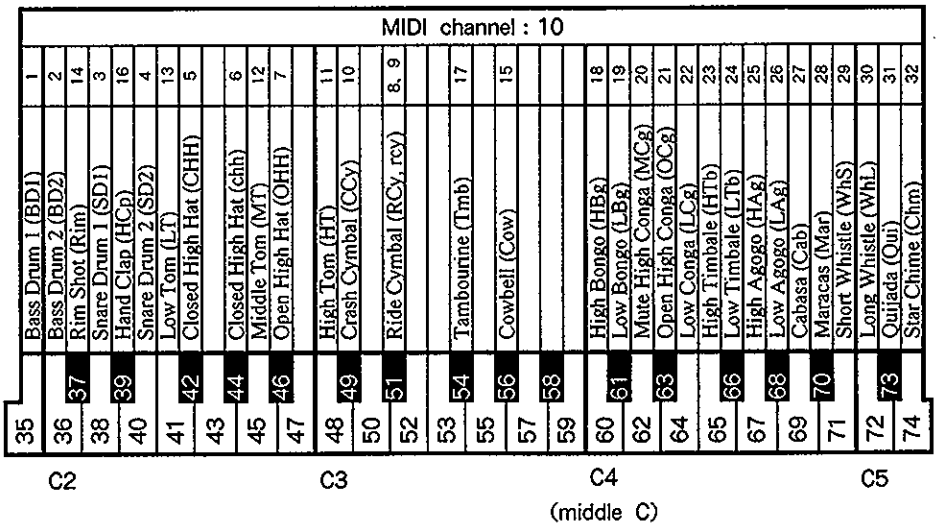
☐ Explanation

This lets you create one - measure Rhythm patterns. You can create up to 240 Rhythm patterns (1—240) for each song. There are two ways to record a Rhythm pattern; by specifying one note at a time (velocity code), or by recording a performance on a drum pad or keyboard. You can also enter flams.

If you need two or more Rhythm patterns that are slightly different, you can create a basic Rhythm pattern and then Copy (☞P.129) it and then edit it.

< Settings before recording >

Before you create a Rhythm pattern, you must specify the MIDI channel / Note number / Instrument name for each drum sound (instrument) to match the rhythm sound module you are using. The MC - 50 allows you to specify instrument numbers 1—32. The initial settings are shown below. If you wish to change these settings, refer to "FUNC 5: Rhythm instruments" (☞P.66).



Input Rhythm patterns using Velocity codes 1—8 to input Note and Velocity data. The velocity values of Note messages received from MIDI IN are converted into Velocity codes before being input.

The velocity value of each Velocity code is initially set as follows. To change these velocity values, refer to "FUNC 4: Rhythm velocity" (☞P.65).

Velocity code	1	2	3	4	5	6	7	8
Velocity value	16	32	48	64	80	96	112	127
Received velocity	1—24	25—40	41—56	57—72	73—88	89—104	105—119	120—127

＊To copy the settings from other Song data, refer to "UTIL 3: Function copy" (☞P.128).

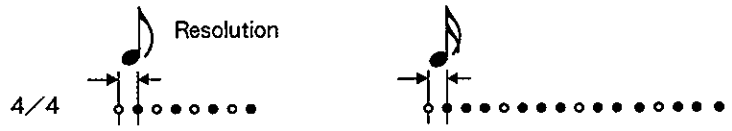
< Rhythm pattern recording >

To create a Rhythm pattern, you will input individual notes (velocity codes) at a timing (grid) determined by the Time and Resolution. The Resolution sets the spacing of the timing grid, and determines the smallest note length that can be input.

When creating a Rhythm pattern, you can use the following time signatures.

1/2—32/2	1/4—32/4	1/8—32/8	1/16—32/16

For example if you use a time signature of 4/4 and a resolution of an 8th note, the recording display will show an eight - part grid. If you set the resolution to a 16th note, a sixteen - part grid will be displayed. To create a Rhythm pattern, specify a Velocity code for each timing of the grid.



If you are inputting a rhythm part using the panel keys, you must specify the Velocity code separately for each instrument number, but if you are inputting from a drum pad, etc., you can input two or more instruments at once.

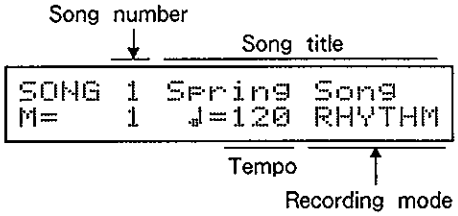
＊The Gate time of each note will be 1/2 the note length of the Resolution.

☐ Input using panel keys

● From Mode 1 standby

① Select the Song number you wish to record, and select the Recording mode (RHYTHM).

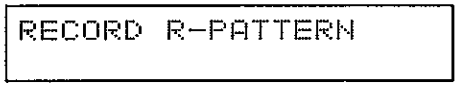
[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



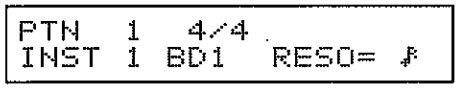
＊To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Pattern recording setting display.

[REC] →
Alpha - dial / Numeric key [2] (select "R - PATTERN") →
[ENTER] / [REC]



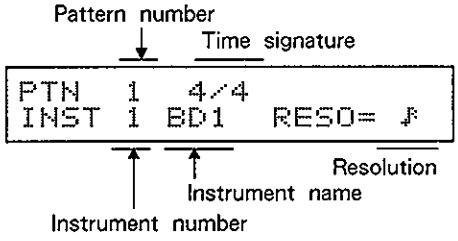
Recording setting display



③ Specify the Pattern number / Time signature / Instrument number you wish to record, and set the Resolution.

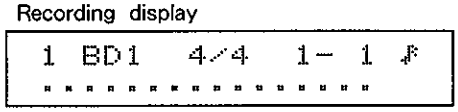
[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the values)
[ENTER] (finalize a value)

When you finalize the Resolution, you will move to the Recording display.



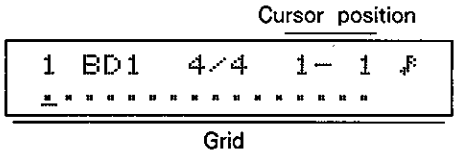
＊The Recording setting display and the Recording display will alternate each time you hold [SHIFT] and press [ENTER].

Recording display



④ For each Instrument number, input a Velocity code into the Grid at the timing you want the instrument to sound.

[◀][▶] (move the cursor)
Hold [SHIFT] and press [◀][▶] (move the cursor one beat)
Numeric keys (input a Velocity Code)
Hold [SHIFT] and use the Alpha - dial / [SKIP] [RESET] (select Instrument numbers)



If you wish to select another Rhythm pattern or change the Time signature or Resolution, move to the Recording setting display (hold [SHIFT] and press [ENTER]), and repeat from step ③.

*To erase a note you have input, move the cursor to that point in the grid and press Numeric key [0].
*Be aware that if you modify the Time signature, some data of the Rhythm pattern may be lost.

< Flam input >

To input a flam, hold [SHIFT] and use the Numeric keys to specify a Velocity code. If you move the cursor to a grid location which contains a flam, a symbol will appear to indicate this.

< Checking a Rhythm pattern (monitor) >

While recording, you can press [PLAY] to playback the Rhythm pattern you have created. If you wish playback to repeat, hold [SHIFT] and press [PLAY]. To stop playback, press [PAUSE]. It is also possible to input while the Rhythm Part is playing. Since you can also playback the Rhythm pattern from the Recording Setting display, you can change the Pattern number to hear other Rhythm patterns.

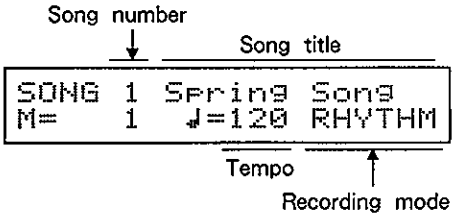
⑤ Stop recording.
[STOP]

☐ Input using a drum pad or MIDI keyboard

● From Mode 1 standby

① Select the Song number you wish to record, and specify the Tempo and the Recording mode (RHYTHM).

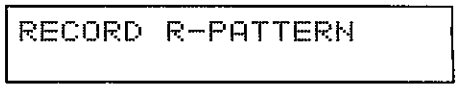
[◀][▶] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



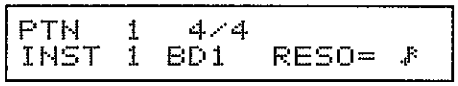
*To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Pattern Recording Setting display.

[REC] →
Alpha - dial / Numeric key [2] (select "R - PATTERN") →
[ENTER] / [REC]



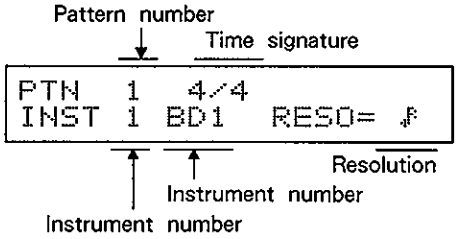
Recording setting display



③ Specify the Pattern number / Time signature you wish to record, and set the Resolution.

[◀] [▶] (move the cursor)
Alpha - dial / Numeric keys (modify the values)
[ENTER] (finalize a value)

When you finalize the Resolution, you will move to the Recording display.



* The Recording setting display and the Recording display will alternate each time you hold [SHIFT] and press [ENTER].

Recording display

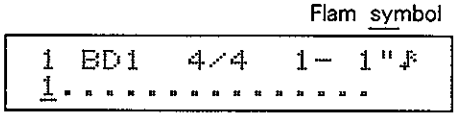
④ Start the Rhythm pattern, and record.

Hold [SHIFT] and press [PLAY] (Repeat playback)
[PAUSE] (stop playback)

When you start the Rhythm pattern, the metronome will sound. Keeping time with the metronome, play the rhythm instruments from your drum pad or MIDI keyboard. Instruments will be recorded without regard to the Instrument number in the display.

< Flam input >

To input a flam, play two notes in rapid succession. If you move the cursor to a grid location which contains a flam, a symbol will appear to indicate this.



If you wish to select another Rhythm pattern, or to change the Time signature or Resolution, move to the Recording Setting display (hold [SHIFT] and press [ENTER]), and repeat from step ③.

* If you wish to check the sound of an instrument without recording it, press [MIDI] to temporarily halt reception of MIDI messages. (The REC indicator will blink.) Press [MIDI] once again to return to normal operation.
* Be aware that if you change the Time signature, some of the data in the Rhythm pattern may be deleted.

⑤ Stop recording.

[STOP]

In the Rhythm Pattern Recording setting display, you can use the following operations.

☐ Copy Rhythm patterns

Other Rhythm patterns in the same song can be copied.

*If you wish to copy Rhythm patterns from another song, refer to "UTIL 4: Rhythm pattern Copy" (☞P.129).

① Select the Pattern number of the copy distination.
[◀][▶] (move the cursor) → Alpha - dial / Numeric keys

② Specify Copy.
Hold [SHIFT] and press Numeric key [2]

Pattern number of the copy distination — Pattern number of the copy source

```
PTN  1 ◀ COPY   1
INST 1 BD1  RESO= ♪
```

③ Select a Pattern number as the copy source, and execute the Copy operation.
Alpha - dial / Numeric keys → [ENTER] → [REC]

☐ Copy individual instruments

The Rhythm pattern data of another instrument in the same pattern number can be copied.

① Move the cursor to the Instrument number, and specify Copy.
[◀][▶] (move the cursor) →
Hold [SHIFT] and press Numeric key [2]

```
PTN  1  4/4
INST 1 ◀ COPY  1 BD1
```

Instrument number of the copy source

② Select the Pattern number of the copy source, and execute the Copy operation.
Alpha - dial / Numeric keys → [ENTER] → [REC]

☐ Erase Rhythm patterns

You can erase unwanted Rhythm patterns.

① Move the cursor to the Pattern number, and select the unwanted Rhythm pattern.
[◀][▶] (move the cursor) → Alpha - dial / Numeric keys

② Specify and execute the Erase operation.
Hold [SHIFT] and press Numeric key [4] → [REC]

```
PTN  1 ERASE >> REC
INST 1 BD1  RESO= ♪
```

☐ Erase individual Instruments

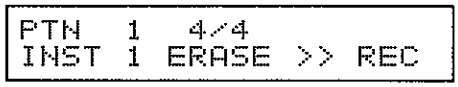
You can erase individual Instruments from the Rhythm pattern.

① Move the cursor to the Instrument number, and select the unwanted instrument.

[◄][►] (move the cursor) → Alpha - dial / Numeric keys

② Specify and execute the Erase operation.

Hold [SHIFT] and press Numeric key [4] → [REC]



In the Recording display, you can use the following operations to erase individual instruments.

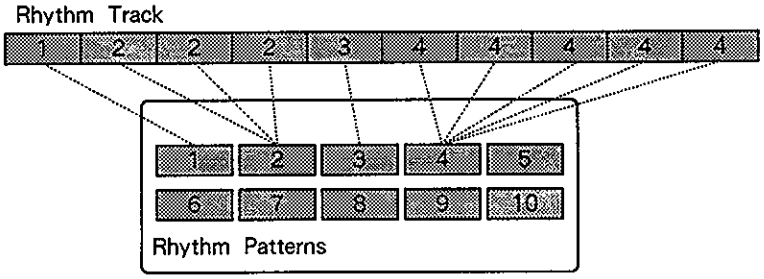
◆While pressing the Hold pedal of your MIDI keyboard, press the key (or pad) corresponding to the instrument number you wish to delete.

◆Connect a pedal switch (DP - 2, etc.) to the PUNCH IN/OUT jack of the MC - 50. While pressing the pedal, press the key (or pad) corresponding to the instrument number you wish to delete.

■ Rhythm Track Recording

☐ Explanation

The Rhythm track arranges previously prepared Rhythm patterns in the order of performance. The Rhythm track does not contain the actual Rhythm pattern data, but only the pattern numbers. This means that if you later modify the Rhythm pattern settings, the performance will change.



< Biasing a Rhythm pattern >

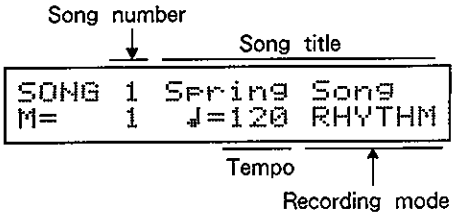
When creating a Rhythm track, you can not only arrange Rhythm patterns in the order of playback, but can also adjust the velocity of each Rhythm pattern. When creating a Rhythm pattern, you specified the velocity of each individual note, but here you can set a Bias to offset the velocity of an entire Rhythm pattern. For example, if you wish to end your song with a fadeout, you can gradually lower the Bias of each Rhythm pattern. Bias can be specified over a range of − 99—+99.

☐ Procedure

● From Mode 1 standby

① Select the Song number you wish to record, and specify the Recording mode (RHYTHM).

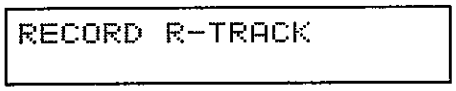
[◄][►] (move the cursor)
Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)



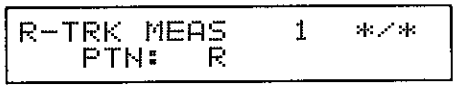
*To select a song number which does not contain song data, hold [SHIFT] and use the Alpha - dial, or use the Numeric keys to select a song number and then hold [SHIFT] and press [ENTER].

② Move to the Rhythm Track recording display.

[REC] →
Alpha - dial / Numeric key [1] (select "R - TRACK") →
[ENTER] / [REC]

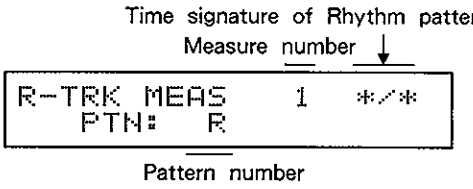


Recording display

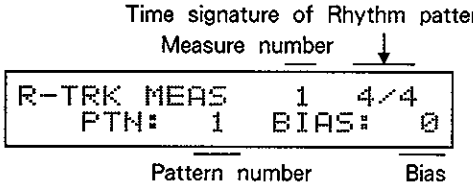


③ Specify the Measure number, Pattern number, and Bias (or Time signature) to assign to the Rhythm pattern.

Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize a value)
[◀][▶] (move the cursor)
[SKIP] [RESET] (move through the measures)



Move through the measures, and arrange the Rhythm patterns.
When you select a Pattern Number, the Time of that Rhythm pattern will be displayed, and you can set the Bias. When you finalize the Bias setting, you will move to the next measure.



< Entering a rest pattern >

To enter a rest pattern, press Numeric key [0].
When entering a rest pattern, you can also specify the Time signature. When you specify the Time signature, you will advance to the next measure.

< Checking a Rhythm pattern (monitor) >

While recording a Rhythm track, you can listen to the selected Rhythm pattern playback by pressing [PLAY]. If you wish to play it back repeatedly, hold [SHIFT] and press [PLAY]. To stop playback, press [PAUSE].

④ Stop recording.
[STOP]

AVAILABLE MEMORY

Use the Available Memory functions
when you wish to check the amount of memory remaining in the MC-50 or on disk, to check the amount of memory used by each song,
to save a song to disk (Current Save),
or to load a song file from disk into MC-50 memory (Current Load).

■ Check remaining Internal/Disk Memory

(Available Memory / Available Disk)

□ Explanation

This allows you to check the amount of internal memory used by each song, and how much more data can be recorded. You can check a disk in the same way.

＊These operations can be performed from Mode 1 standby, or from Modes 2—5 menu displays. However, they cannot be performed from Mode 3 when you have selected a song number to be Linked.

＊The amount of memory is displayed in units called "bytes".

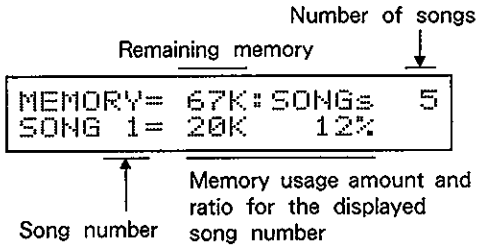
□ Check internal memory (Available Memory)

① Move to the Available Memory display, and check each item.

Hold [SHIFT] and press [AVAIL]

Alpha - dial / Numeric keys (select song numbers)

＊If you are in standby condition, and select a song number for which there is no song data, a framework for creating song data will be created for that song number. This framework uses 1 Kbyte of memory, so even if there is no song data, the display will show "1K". If a song file was not read when you started up SUPER-MRC, a framework will automatically be created for song number 1.


Number of songs
Remaining memory
MEMORY= 67K:SONGs 5
SONG 1= 20K 12%
Song number
Memory usage amount and ratio for the displayed song number

● To exit this function, press [STOP].

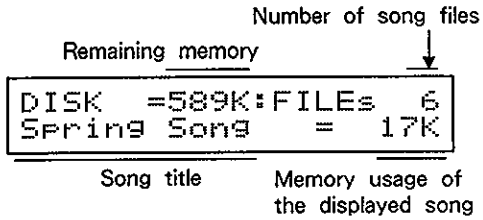
□ Check disk (Available Disk)

① Insert a disk.

② Move to the Available Disk display, and check each item.

Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]

Alpha - dial (select song files)



If you wish to check the Disk Name, press [FUNC]. To return to the previous display, press [FUNC] once again.

● To exit this function, press [STOP].

■ Saving and Loading a Song (Current Load / Current Save)

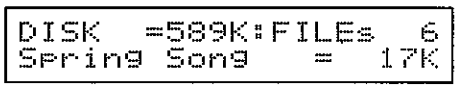
☐ **Explanation** Mode 2 allows you to save and load song data, but mode 1 allows you to save or load just one song from disk.

☐ Loading a song file (Current Load)

● From Mode 1 standby

① Select the Song number you wish to load.

② Insert the disk, and move to the Available Disk display.
Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]



Song title

③ Select the Song file you wish to load, and execute loading.
Alpha - dial → [LOAD]

● When loading is completed, you will return to the standby display.

☐ Saving a song file (Current Save)

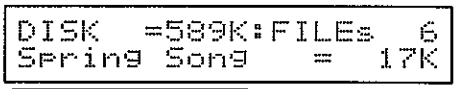
*You must give a name to a song before you can save it to disk. To name a song, refer to "FUNC 3: Song title" (☞P.64).

*Note! If the disk already contains another song file of the same name, it will be overwritten without a warning display.

● From Mode 1 standby

① Select the Song number into which you want to save the song data.

② Insert the disk, and move to the Available Disk display.
Hold [SHIFT] and press [AVAIL] → [MICROSCOPE]



Song title

③ Execute saving.
Hold [SHIFT] and press [SAVE]

● When saving is completed, you will return to the standby display.

MIDI

These settings determine how MIDI messages are transmitted and received. Changes you make in these settings will be lost when you turn the power off. If you wish to keep your settings, save them to disk as a Configuration file (☞ P.164, "3: Save a Configuration data").
If you wish to use the settings of a Configuration file, refer to "Play" (☞ P.14) or "2: Load a Configuration file" (☞ P.163).

MIDI 1:	Select the Reveive Channel	(Receive Channel)
MIDI 2:	Select the MIDI Messages to receive	(Receive Status)
MIDI 3:	Specify how MIDI Messages are transmitted	(Transmit Condition)

MIDI 1 : Select the Receive Channel

Explanation

Here you can select the MIDI channels to receive. Use this to specify the receive channel when you wish to rerecord only a specified MIDI channel in Replace Recording (☞P.28) or Punch In Recording (☞P.34, 35). Normally, you will set this to receive all MIDI channels (ALL).

* This setting also applies to the MIDI messages re - transmitted by Soft Thru (☞P.58).
* If you wish to receive only a specific type of MIDI message, refer to the following item.
* System messages (exclusive, common, realtime, etc.) will be received regardless of this setting.

Procedure

● From Mode 1 standby

① Move to the Receive Channel display.

[MIDI] → (Numeric key [1] / Alpha - dial) → [ENTER]

MIDI function number
MIDI function name

```
MIDI 1 RCV CHANNEL
       CH = ALL
```

② Select the Receive channel.

Alpha - dial / Numeric keys (modify the value)
[ENTER] (finalize the value)

```
MIDI 1 RCV CHANNEL
       CH = ALL
```

Receive channel

● To exit this setting, press [STOP].

* The actual receive channel will not be changed until you exit this setting.

■ MIDI 2 : Select the MIDI Messages to receive

(Receive Status)

☐ Explanation

This selects the MIDI messages that will be received. Normally you will leave this set so that all MIDI messages are received, but if you want a specific type of MIDI message to not be recorded, you can turn off the reception for that message.

For example when you are recording in realtime, Aftertouch messages may be transmitted from your keyboard and recorded even if you do not wish to record them. In such cases, you can set the MC - 50 so that it will not receive Aftertouch messages.

You can select the following types of MIDI status (types of MIDI message).

Display	MIDI status
PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
CCa	Control Change 0—63
CCb	Control Change 64—120, Local On/Off
PG	Program Change
CAf	Channel Aftertouch (Channel Key Pressure)
PB	Pitch Bend
EX	Exclusive

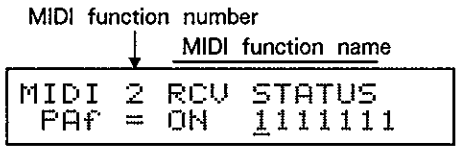
＊These settings also apply to the MIDI messages re - transmitted by the Soft Thru function (☞P.58).

☐ Procedure

● From Mode 1 standby

① Move to the Receive Status display.

[MIDI] → (Numeric key [2] / Alpha - dial) → [ENTER]

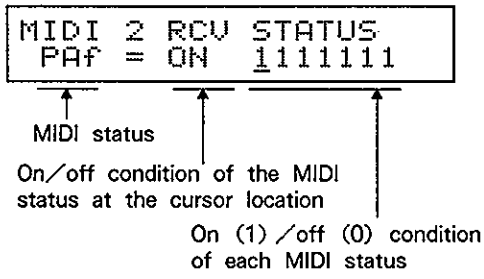


② Turn reception on/off for each MIDI status.

Alpha - dial / Numeric keys (modify the value)

[◀][▶] (select a MIDI status)

＊When you use the Numeric keys to specify the value, the value will be finalized immediately.


MIDI 2 RCV STATUS
PAf = ON 1111111
MIDI status
On/off condition of the MIDI status at the cursor location
On (1) /off (0) condition of each MIDI status

● To exit this function, press [STOP].

■ MIDI 3 : Specify how MIDI Messages are transmitted (Transmit Condition)

☐ **Explanation** You can specify how messages are transmitted from MIDI OUT for the following five categories.

◆ THRU (Soft Thru)

Initial value: OUT2

Soft Thru determines how the MIDI messages received at MIDI IN will be re - transmitted from MIDI OUT. Here you can specify the MIDI OUT from which the messages will be re - transmitted.

*While data is being written to or read from disk, MIDI messages recieved at MIDI IN will not be re-transmitted from MIDI OUT even if the Soft Thru function has been turned on.

◆ CLK (Timing Clock)

Initial value: 1 + 2

This specifies the MIDI OUT from which the MIDI messages Start / Continue / Stop / Song Position Pointer / Song Select will be transmitted.

◆ AOff (All Notes Off)

Initial value: OFF

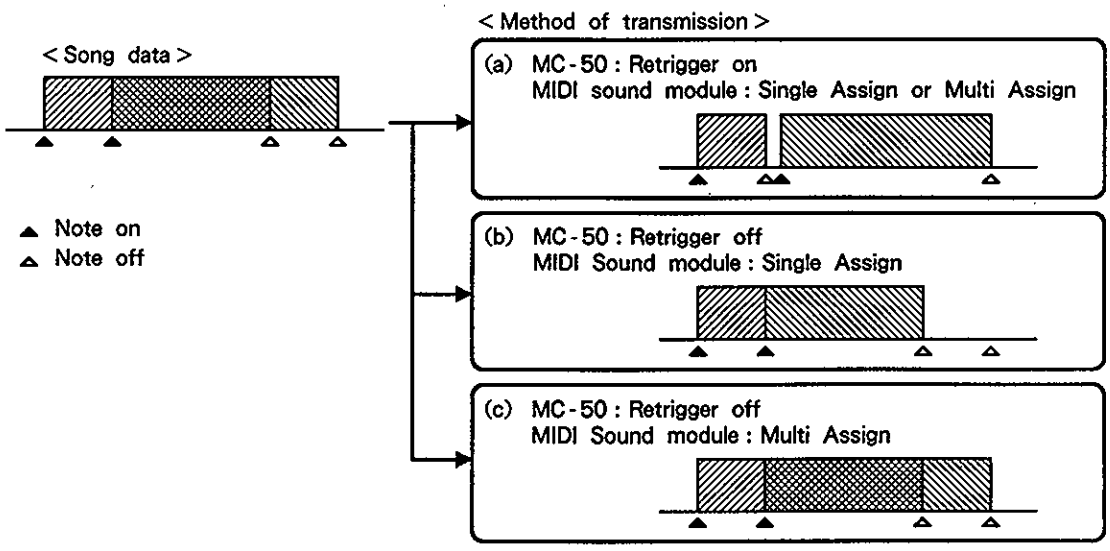
This specifies the MIDI OUT from which the All Notes Off message (a message which turns all notes off) will be transmitted. If you are using a MIDI sound module which is not set to mode 3 (Omni Off, Poly), turn this off.

◆ RTRG (Retrigger)

Initial value: 1 + 2

Retrigger specifies how Note messages will be transmitted when more than one Note message of the same note number and same MIDI channel are recorded overlapping. This specifies only the method of transmission, and has no effect on the song data itself.

Normally, you will set Retrigger On (figure a), but if your MIDI sound module processes notes in Multi Assign mode, set this on (figure a) or off (figure c) as appropriate.



If your MIDI sound module is in Single Assign mode and receives two or more Note messages of the same note number on the same MIDI channel, it will play only one note at a time. If your MIDI sound module is in Multi Assign mode and receives two or more Note messages of the same note number on the same MIDI channel, it will play the notes overlapping.

*If your MIDI sound module is in Single Assign mode, the sounded note length may be shortened, so do not turn Retrigger Off (see figure b).

*The Retrigger setting also applies to the MIDI messages transmitted by Soft Thru.

◆ ActS (Active Sensing)

Initial value: 1 + 2

Active Sensing messages are transmitted at regular intervals from MIDI OUT. This prevents stuck notes on the sound module in the event that MIDI messages are cut off, such as when a MIDI cable is broken or disconnected. Here you can specify the MIDI OUT from which Active Sensing messages will be transmitted. To prevent problems, you should normally transmit Active Sensing messages.

*Some MIDI sound modules cannot correctly process Active Sensing messages. In such cases, turn off Active Sensing.

You can choose from the following settings.

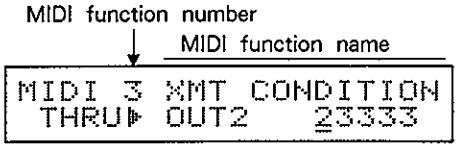
Numeric key input	Value (display)	Function	Retrigger operation
0	OFF (0)	Not transmitted	Not retriggered
1	OUT 1 (1)	Transmitted from MIDI OUT 1	MIDI OUT 1 is retriggered
2	OUT 2 (2)	Transmitted from MIDI OUT 2	MIDI OUT 2 is retriggered
3	1 + 2 (3)	Transmitted from both MIDI OUTs	Both MIDI OUTs are retriggered

☐ Procedure

● From Mode 1 standby

① Move to the Transmit Condition display.

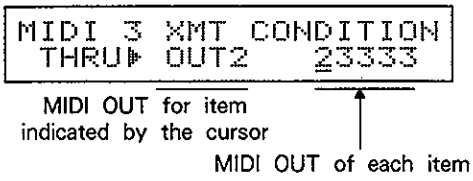
[MIDI] → (Numeric key [3] / Alpha - dial) → [ENTER]



② Set the MIDI OUT for each item.

Alpha - dial / Numeric keys (modify values)

[◀][▶] (select items)



*When you specify a value using the Numeric keys, it will be finalized immediately.

● When you finish making settings, press [STOP].

FUNCTION

The MC-50 provides 14 functions, which can be set independently for each song, and are handled as part of the Song data. This means that when you save Song data, the Function settings for the song are also saved.

FUNC 1: Synchronization ····· (Sync Clock)
FUNC 2: Using the Metronome ····· (Metronome)
FUNC 3: Name a Song ····· (Song Title)
FUNC 4: Specify Velocity Codes ····· (Rhythm Velocity)
FUNC 5: Assign Drum Sounds ····· (Rhythm Instruments)
FUNC 6: Specify the recording area for Auto Punch In Recording ····· (Punch Point)
FUNC 7: Specify the area to be repeated for Block Repeat Play ····· (Block Repeat)
FUNC 8: Automatically Stop Playback/Recording ····· (Auto Stop)
FUNC 9: Set Basic Tempo ····· (Basic Tempo)
FUNC 10: Set Locate Point ····· (Locate Point)
FUNC 11: Set MIDI OUT for each Track ····· (Output Assign)
FUNC 12: Convert Transmit Channels ····· (Transmit Channel)
FUNC 13: Specify Note Name display for Black Keys ····· (Note Name)
FUNC 14: Write a Memo for a Song ····· (Song Log)

*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞ P.128, "Copy function settings").

■ FUNC 1 : Synchronization (Sync Clock)

☐ Explanation

When playing back or recording in synchronization with another sequencer or MTR (multitrack recorder), you must set the Sync clock to an appropriate setting.

Numeric key input	Value	Operation
1	INTERNAL	Select this when using the MC-50 clock to synchronize external devices. (sequencer, etc.)
2	MIDI	The MC-50 will synchronize to MIDI Clock messages from an external MIDI device. It can also be controlled by Start/Continue/Stop messages, and will respond to Song Position Pointer and Song Select messages.
3	TAPE	The MC-50 will synchronize to a tape sync signal (FSK signal) recorded on an MTR.

If this has been set to other than "INTERNAL", the Tempo indication in the standby display will be as follows.

Sync clock : MIDI

Sync clock : TAPE

*If you are not synchronizing the MC-50 to an external device, select "INTERNAL". If "MIDI" or "TAPE" is selected, the MC-50 can not operate by itself.

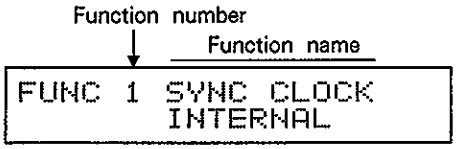
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Sync Clock display.

FUNC → (Numeric key 1 / Alpha - dial) → ENTER



② Select the Sync clock.

Alpha - dial / Numeric keys (modify the setting)

ENTER (finalize the setting)

● Press STOP to complete settings.

■FUNC 2 : Using the Metronome

☐ Explanation

This setting determines how the metronome will sound the beat. You can adjust the volume of the metronome using the Metronome Volume knob on the rear panel. (The output level of the METRONOME OUTPUT jack will also change.)

Select one of the following metronome beats. The panel Beat Indicator will blink according to this setting. Normally you will set this to "AUTO".

Numeric key input	Value	Operation
0	AUTO	The metronome will sound according to the beat of the Song data.
1	𝅘𝅥𝅯	The metronome will sound at the specified beat, regardless of the beat of the Song data.(However when the measure changes, the metronome will be reset.)
2	♪	
3	♩	
4	♩.	
5	𝅗𝅥	

Select one of the following ways for the metronome to sound. Normally you will set this to "REC only" or "REC&PLAY".

Numeric key input	Value	Operation
0	OFF	Does not sound
1	REC only	Sounds during recording
2	REC & PLAY	Sounds during recording and playback
3	Always	Sounds during standby mode, playback, and recording

*The Metronome Volume knob will also adjust the volume of the warning signal. If you turn the volume too low, you will not be able to hear the warning signal.

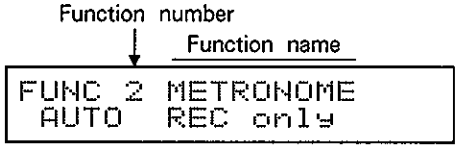
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Metronome display.

[FUNC] → (Numeric key [2] / Alpha - dial) → [ENTER]

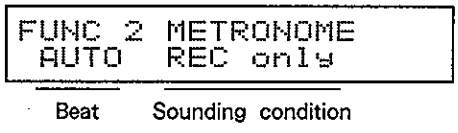


② Specify how the beat will be sounded.

Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◀] [▶] (move the cursor)



● Press [STOP] to complete settings.

■ FUNC 3 : Name a Song (Song Title)

☐ Explanation

You can assign a name (Title) to the song in MC - 50 memory. You must assign a Song Title before saving song data to disk. It is not possible to save an unnamed song.

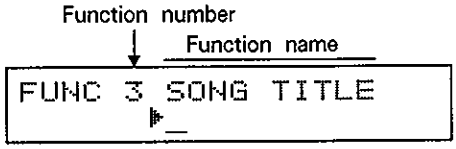
＊It is not possible to save two or more songs of the same Song Title on a single disk. However, identically spelled names are considered different if the case (upper or lower) of one or more characters is different.

☐ Procedure

● From Mode 1 standby

① Move to the Song Title display.

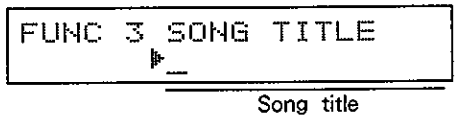
[FUNC] → (Numeric key [3] / Alpha - dial) → [ENTER]



② Assign a Song Title.

Alpha - dial / Numeric keys (select characters)

[◀][▶] (move the cursor)



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " ＊ + − ／ < = > ( ) [ ] { } ˆ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

● Press [STOP] to complete settings.

■ FUNC 4 : Specify Velocity Codes (Rhythm Velocity)

☐ Explanation

These settings determine the Velocity values used when creating a Rhythm pattern. Set a velocity value for each of the Velocity codes 1—8. Set values that are appropriate for your MIDI rhythm sound module.

The Velocity value of each Velocity code is initially set as follows.

Velocity code	1	2	3	4	5	6	7	8
Velocity value	16	32	48	64	80	96	112	127

*When creating a Rhythm track, you can use Bias settings to adjust the overall Velocity values of each Rhythm pattern (☞P.48, "Rhythm track recording").

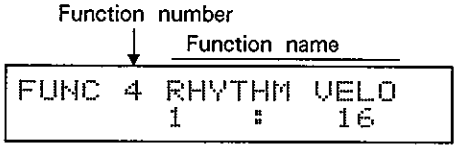
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Rhythm Velocity display.

[FUNC] → (Numeric key [4] / Alpha - dial) → [ENTER]

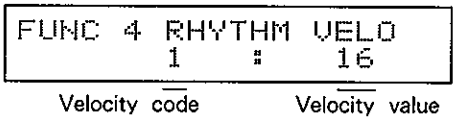


② Specify the Velocity value for each Velocity code.

Alpha - dial / Numeric keys (modify the values)

[ENTER] (finalize the value / select Velocity Codes)

[◀][▶] (move the cursor)

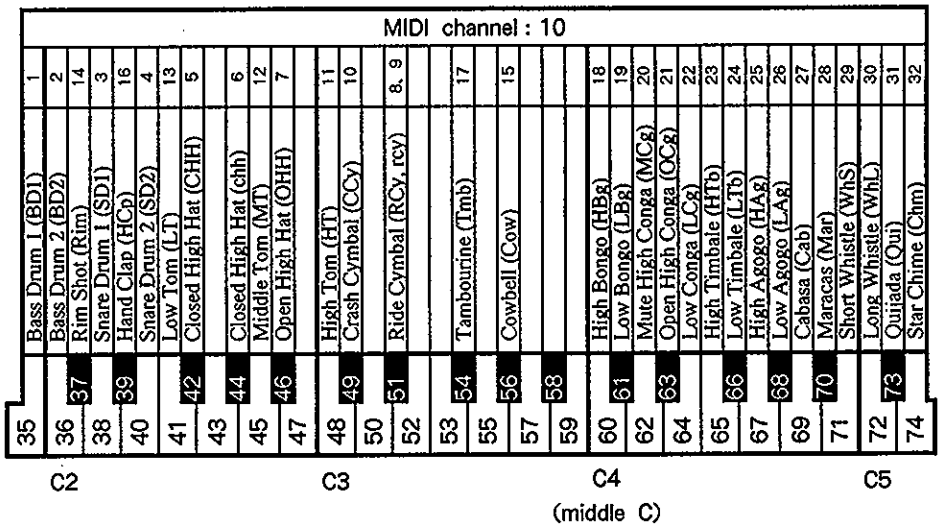


● Press [STOP] to complete settings.

FUNC 5 : Assign Drum Sounds (Rhythm Instruments)

Explanation

These settings determine the drum sound assignments used when you create a Rhythm pattern. For each instrument number (1—32), you can specify an Instrument Name (three characters), MIDI Channel, and Key Number (note number). Make settings as appropriate for your MIDI rhythm sound module.


MIDI channel : 10
1 Bass Drum 1 (BD1) 35
2 Bass Drum 2 (BD2) 36
14 Rim Shot (Rim) 37
3 Snare Drum 1 (SD1) 38
16 Hand Clap (HCp) 39
4 Snare Drum 2 (SD2) 40
13 Low Tom (LT) 41
5 Closed High Hat (CHH) 42
6 Closed High Hat (chh) 43
12 Middle Tom (MT) 44
7 Open High Hat (OHH) 46
11 High Tom (HT) 47
10 Crash Cymbal (CCy) 48
8, 9 Ride Cymbal (RCy, rcy) 49
17 Tambourine (Tmb) 50
15 Cowbell (Cow) 51
18 High Bongo (HBg) 52
19 Low Bongo (LBg) 53
20 Mute High Conga (MCg) 54
21 Open High Conga (OCg) 55
22 Low Conga (LCg) 56
23 High Timbale (HTb) 57
24 Low Timbale (LTb) 58
25 High Agogo (HAg) 59
26 Low Agogo (LAg) 60
27 Cabasa (Cab) 61
28 Maracas (Mar) 62
29 Short Whistle (WhS) 63
30 Long Whistle (WhL) 64
31 Quijada (Qui) 65
32 Star Chime (Chm) 66 67 68 69 70 71 72 73 74
C2 C3 C4 C5
(middle C)

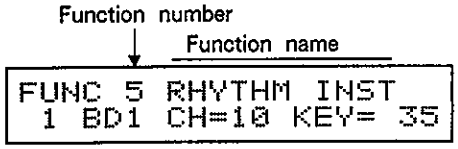
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

Procedure

● From Mode 1 standby

① Move to the Rhythm Instrument display.

[FUNC] → (Numeric key [5] / Alpha - dial) → [ENTER]



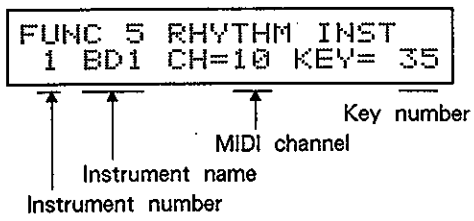
*When you press [PLAY], the displayed Note message will be transmitted from MIDI OUT to play the drum sound of the connected MIDI sound module, allowing you to check the assignment.

② For each Instrument number (1—32), specify the Instrument Name, MIDI channel, and Key number.

Alpha - dial / Numeric keys (modify values / select characters)

[ENTER] (finalize a value)

[◀][▶] (move the cursor)



You can use the following characters in an Instrument name.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − ／ < = > () [] {} ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Move to the next Instrument number	[SKIP]
Move to the previous Instrument number	[RESET]

● Press [STOP] to complete settings.

■ FUNC 6 : Specify the recording area for Auto Punch In Recording (Punch Point)

☐ Explanation

These settings specify the area which will be recorded (Punch In point and Punch Out point) when you use Auto Punch In Recording (☞P.34). You can use Measures or Locate points to specify the area to be recorded.

*If you wish to use Locate points to specify the recording area, you must first set the Locate points (☞P.18 or P. 72).

☐ Procedure

● From Mode 1 standby

① Move to the Punch Point display.

[FUNC] → (Numeric key [6] / Alpha - dial) → [ENTER]

Function number
Function name

```
FUNC 6 PUNCH POINT
FROM M=    1 FOR ALL
```

② Set the recording area.

Alpha - dial / Numeric keys (modify the setting)
[ENTER] (finalize the setting)
[◀][▶] (move the cursor>

```
FUNC 6 PUNCH POINT
FROM M=    1 FOR ALL
```

Punch In measure
Number of measures from Punch In to Punch Out

If you wish to use Locate points to specify the area to be recorded, press [LOC] to get the Punch point "LOC" display. Each time you hold [SHIFT] and press [LOC], the two Punch point displays will alternate.

```
FUNC 6 PUNCH POINT
LOC: BTWN *   AND *
```

Locate number for Punch In
Locate number for Punch Out

*It is not possible to use both Measures and Locate points to specify an area to be recorded. The last-selected one will be used.

*When using Locate points to specify the area to be recorded, if the position of the Punch Out is before (or the same as) the Punch In point, it will not be possible to Auto Punch Out when you use Auto Punch In Recording.

● Press [STOP] to complete settings.

■ FUNC 7 : Specify the area to be repeated for Block Repeat Play (Block Repeat)

☐ Explanation

These settings determine the area which will be repeated when you use the Block Repeat Play function (☞P.16). The Block Repeat Play function repeatedly plays back the specified area. You can specify the area by Measure or by Locate point.

*If you wish to use Locate points to specify the repeated area, you must first set the Locate points (☞P.18 or P. 72).

☐ Procedure

● From Mode 1 standby

① Move to the Block Repeat display.

[FUNC] → (Numeric key [7] / Alpha - dial) → [ENTER]

Function number
Function name

```
FUNC 7 BLOCK REPEAT
FROM M=    1 FOR ALL
```

② Specify the area to be repeated.

Alpha - dial / Numeric keys (modify the setting)
[ENTER] (finalize the setting)
[◀][▶] (move the cursor>

```
FUNC 7 BLOCK REPEAT
FROM M=    1 FOR ALL
```

Measure from which to begin repeating
Number of measures to repeat

If you wish to use Locate points to specify the repeated area, press [LOC] to get the Block Repeat "LOC" display. Each time you hold [SHIFT] and press [LOC], the two Block Repeat displays will alternate.

```
FUNC 7 BLOCK REPEAT
LOC: BTWN *   AND *
```

Locate number from which to begin repeating
Locate number from which to end repeating

*It is not possible to specify a Block Repeat area using both Measures and Locate points. The last - selected one will be used.

*When using Locate points to specify a Block Repeat area, if the position of the beginning point is before (or the same as) the ending point, Block Repeat Play will begin at the starting point, but will not repeat.

● Press [STOP] to complete settings.

■ FUNC 8 : Automatically Stop Playback/ Recording (Auto Stop)

☐ Explanation

These settings determine whether or not playback or recording will automatically stop at a specified location (Stop point). You can use Measures or Locate points to specify the Stop point. If you have specified the Stop point as a Measure, recording or playback will stop at the beginning of that measure.

You can set Auto Stop in the following ways.

Numeric key input	Value	Operation
0	OFF	Auto Stop will not occur
1	PLAY	Auto Stop at the specified point only for playback
2	REC	Auto Stop at the specified point only for recording
3	REC & PLAY	Auto Stop at the specified point for both playback and recording

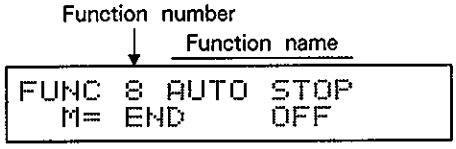
* If you have selected "REC" or "REC & PLAY", it will not be possible to use Count In Recording from the Stop Point. In such cases, turn the Stop Mode "OFF".
* If you wish to use Locate points to specify the Auto Stop point, you must first set the Locate points (☞P.18 or P. 72).
* If you wish to stop recording or playback at the beginning of the measure following the Stop point, refer to "CNFG 1: Locate mode" (☞P.156).

☐ Procedure

● From Mode 1 standby

① Move to the Auto Stop display.

[FUNC] → (Numeric key [8] / Alpha - dial) → [ENTER]

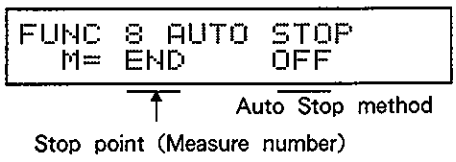


② Specify the Stop point and the Auto Stop method.

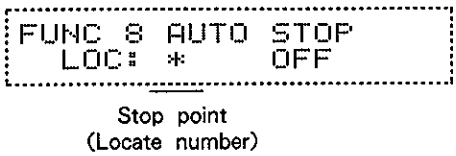
Alpha - dial / Numeric keys (modify the setting)

[ENTER] (finalize the setting)

[◀][▶] (move the cursor)



If you wish to use a Locate point to specify the Stop point, press [LOC] to get the "LOC" display. Each time you hold [SHIFT] and press [LOC], the setting displays will alternate.



* It is not possible to specify the Stop point using both Measures and Locate points. The last - specified one will be used.

● Press [STOP] to complete settings.

■ FUNC 9 : Set Basic Tempo

☐ Explanation

This setting determines the Basic tempo of a song. The Basic tempo is shown in the standby display immediately after a song has been loaded from disk.

You may freely change the Basic tempo during playback, but these changes are temporary. Once you have changed the Basic tempo, you can restore the original Basic tempo specified by the song by holding [SHIFT] and rotating the Alpha - dial. The initial Basic tempo setting is 120.

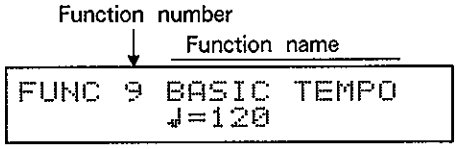
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Basic Tempo display.

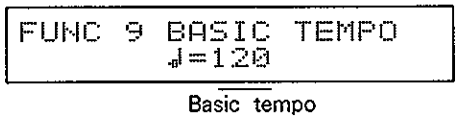
[FUNC] → (Numeric key [9] / Alpha - dial) → [ENTER]



② Specify the Basic tempo.

Alpha - dial / Numeric keys (modify the value)

[ENTER] (finalize the value)



● Press [STOP] to complete settings.

■ FUNC 10 : Set Locate Point

☐ Explanation

Locate points specify a location by Measure/Beat/Clock. In the standby condition and in the Microscope display, you can move quickly to a previously set Locate point (☞ P.18, "Locate Jump"). Also, Locate points can be used to specify areas and positions in the following functions. Locate points allow you to specify a position more precisely than by using Measures.

EDIT 1 : Erase	P. 80
EDIT 2 : Delete	P. 82
EDIT 5 : Extract	P. 85
EDIT 6 : Transpose	P. 88
EDIT 7 : Change Velocity	P. 90
EDIT 8 : Change MIDI Channel	P. 92
EDIT 9 : Quantize	P. 94
EDIT 10 : Copy	P. 96
EDIT 11 : Change Gate Time	P. 98
EDIT 12 : Shift Clock	P. 100
EDIT 13 : Data Thin	P. 102
EDIT 15 : Multi Edit	P. 105

FUNC 6 : Punch Point	P. 68
FUNC 7 : Block Repeat	P. 69
FUNC 8 : Auto Stop	P. 70

UTIL 2 : Time Calculation	P. 127
UTIL 6 : Data Check	P. 131

There are nine Locate points (0—9). You may freely set the position of Locate points 1—8.

Locate number	Type of Locate point	Remarks
0	System Locate point	This is set automatically where recording begins.
1—8	User Locate point	These can be set at any location in the song.
9	System Locate point	This is set automatically where recording ends.

* Locate points are renewed each time they are set.
* To easily set or cancel Locate points, refer to page 18 "Locate point settings" and page 19 "Locate point delete".
* The position of a Locate point is not affected when you modify the song data. Also, it is possible to set a Locate point which does not exist in the song.
* All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞ P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Locate point display.

[FUNC] → (Numeric key [1] → [0] / Alpha - dial) → [ENTER]

Function number

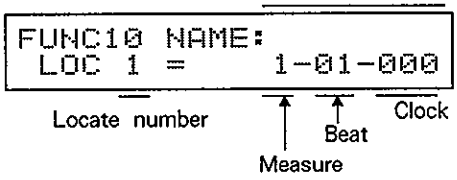
② Specify the Measure / Beat / Clock / Name for each Locate point.

Alpha - dial / Numeric keys (modify values / select characters)

[ENTER] (finalize the value)

[◀] [▶] (move the cursor)

Locate point name



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will cycle through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]
Move to the next Locate number	[SKIP]
Move to the previous Locate number	[RESET]

● Press [STOP] to complete settings.

■FUNC 11 : Set MIDI OUT for each Track

(Output Assign)

☐ Explanation

These settings determine how song data of each track (except the Tempo track) will be output from the two MIDI OUT connectors. For example, if tracks 1 and 2 each contain 16 channels of song data, you can assign track 1 to MIDI OUT 1, and track 2 to MIDI OUT 2, for a performance using 32 MIDI sound modules.

Select one of the following Output Assignments. Normally you will select 1+2, but if you are using more than 16 sound modules, you should split the two MIDI OUTs.

Numeric key input	Value (display)	Operation
0	OFF (0)	Not transmitted
1	OUT 1 (1)	Transmitted from MIDI OUT 1
2	OUT 2 (2)	Transmitted from MIDI OUT 2
3	1 + 2 (3)	Transmitted from both MIDI OUTs

*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

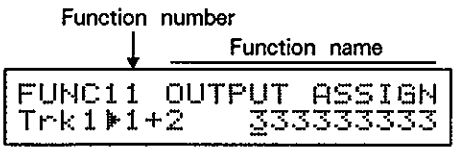
*The MIDI OUT for the messages retransmitted by the Soft Thru function is determined by "MIDI 3: Transmit condition" (☞P.58), and is not affected by this FUNC 11 setting.

☐ Procedure

● From Mode 1 standby

① Move to the Output Assign display.

[FUNC] → (Numeric key [1] → [1] / Alpha - dial) → [ENTER]

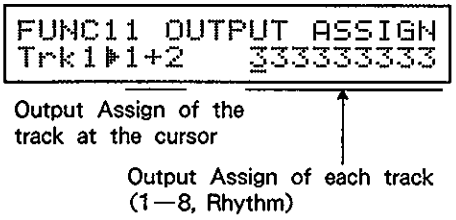


② Specify the Output assignment for each track.

Alpha - dial / Numeric keys (modify the value)

[◀][▶] / Track keys (select tracks)

*When you use the Numeric keys to enter a value, it will be finalized immediately.



● Press [STOP] to complete settings.

■FUNC 12 : Convert Transmit Channels

☐Explanation

These settings specify how each MIDI channel 1—16 of data in each track will be converted to another MIDI channel as it is transmitted. (Converting the transmitted data will not affect the MIDI channel of the actual song data.) This allows you to transmit song data on a different channel from when it was recorded, allowing the same data to be used to play a different sound module without having to change the settings of the sound module.
You can also specify that a certain MIDI channel of song data not be transmitted.

＊If you wish to modify the MIDI channel of the actual song data, refer to "EDIT 8: Change MIDI channel" (☞P.92).
＊All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").
＊The transmit channel of MIDI messages retransmitted by Soft Thru will not be converted.

☐Procedure

● From Mode 1 standby

① Move to the Transmit Channel display.

FUNC → (Numeric key 1 → 2 / Alpha - dial) → ENTER

Function number
Function name

From left to right, the lower line of the display shows the MIDI channel 1—16 into which each channel of song data will be converted for transmission.

```
FUNC12 XMT CH  TRK-1
1234567891011121314151 6
```

② Select a Phrase track (1—8), and modify the transmit channels.

Alpha - dial / Numeric keys (modify the value)
ENTER (finalize the value)
◀ ▶ (move the cursor)

Track

```
FUNC12 XMT CH  TRK-1
1234567891011121314151 6
```

Transmit channel

< Using the Numeric keys to enter the transmit channel >

To specify a channel 1—9	Numeric keys 1—9
To specify a channel 10—16	Hold SHIFT and press Numeric keys 0—6
To turn transmission off	Numeric key 0

＊When you specify a transmit channel using the Numeric keys, it will be finalized immediately.

< Example of settings >

The display at right shows channels 10 and 13—15 turned off, and channel 16 converted into channel 5.

```
FUNC12 XMT CH  TRK-1
123456789.111 2...5
```

● Press STOP to complete settings.

■FUNC 13 : Specify Note Name display for Black Keys

☐Explanation

These settings determine whether the black keys will be displayed as # or ♭ note names when you use the Microscope function. Make settings as appropriate for your song. For example if the song is in E flat major (or C minor), set them all to ♭ .

＊This function affects only the display, and has no effect on input methods.

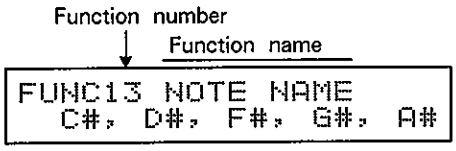
＊All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐Procedure

● From Mode 1 standby

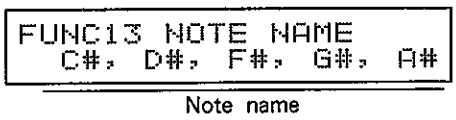
① Move to the Note Name display.

[FUNC] → (Numeric key [1] → [3] / Alpha - dial) → [ENTER]



② Select #/ ♭ for each note name.

Alpha - dial / Hold [SHIFT] and
press Numeric key [7] (♭) or [8] (#) (modify values)
[ENTER] (finalize the setting)
[◀][▶] (move the cursor)



● Press [STOP] to complete settings.

■ FUNC 14 : Write a Memo for a Song (Song Log)

☐ Explanation

This function allows you to write a memo for the song in memory. You have 16 characters × 99 lines to write in. This is a convenient way to remember the names and settings of the equipment used in this song.

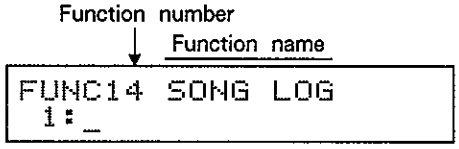
*All settings for FUNC 1, 2, 4, 5, 9, 10, 11, 12, 13, and 14 can be copied to another song with a single operation (☞P.128, "Copy function settings").

☐ Procedure

● From Mode 1 standby

① Move to the Song Log display.

[FUNC] → (Numeric key [1] → [4] / Alpha - dial) → [ENTER]

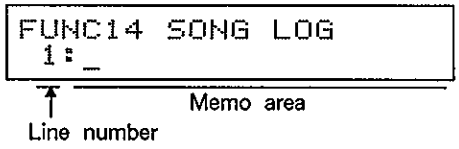


② Write the memo.

Alpha - dial / Numeric keys (select line numbers / characters)

[ENTER] (finalize the setting)

[◀][▶] (move the cursor)



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Using the Numeric keys to input characters >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will cycle through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]
Move to the next line	[SKIP]
Move to the previous line	[RESET]

● Press [STOP] to complete settings.

EDIT

Fifteen types of editing operation are provided, allowing you to edit and modify song data in various ways. After you execute an editing operation, it may not always be possible to recover the previous data. Be sure to save the original song data to disk.

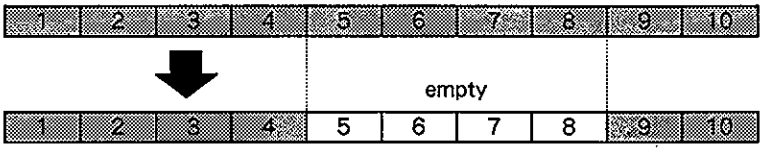
EDIT 1: Erase Song Data ..... (Erase)
EDIT 2: Delete Song Data ..... (Delete)
EDIT 3: Insert Blank Measures ..... (Insert Measure)
EDIT 4: Combine the Song Data of two Phrase Tracks ..... (Merge)
EDIT 5: Transfer Song Data ..... (Extract)
EDIT 6: Transpose Song Data ..... (Transpose)
EDIT 7: Change Velocity ..... (Change Velocity)
EDIT 8: Change MIDI Channels ..... (Change MIDI Channel)
EDIT 9: Correct Note Timing ..... (Quantize)
EDIT 10: Copy Song Data ..... (Copy)
EDIT 11: Change Gate Time ..... (Change Gate Time)
EDIT 12: Shift Timing ..... (Shift Clock)
EDIT 13: Thin out MIDI Messages ..... (Data Thin)
EDIT 14: Exchange Phrase Tracks ..... (Track Exchange)
EDIT 15: Convert MIDI Messages ..... (Multi Edit)

■ EDIT 1 : Erase Song Data

☐ Explanation

This operation erases a specified area of song data. You can erase specified types of MIDI status (MIDI messages). Use this operation to erase MIDI messages you recorded or input by mistake.

Example : If all song data of Phrase tracks 1—8, measures 5—8 were erased blank



*The erased area of the Rhythm track will be replaced with rest patterns.

You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	---
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	---
Hold [SHIFT] and press 4	PB (Pitch Bend)	---
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	---

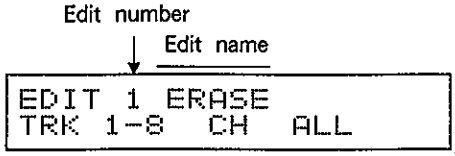
*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Erase display.

[EDIT] → (Numeric key [1] → Alpha - dial) → [ENTER]



② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to erase.

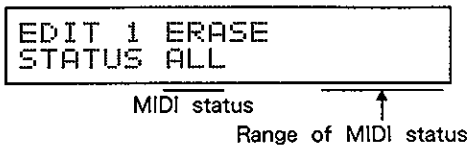
Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀][▶] (move the cursor)

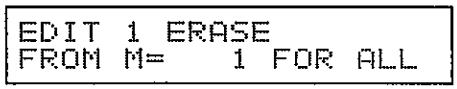
*If you are erasing the Rhythm track, it is not possible to specify the MIDI channel.



If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

Area to erase



Starting measure

Number of measures from starting measure

Starting Locate number

Ending Locate number

Execute display

③ Execute the Erase operation from the Execute display.
[REC]

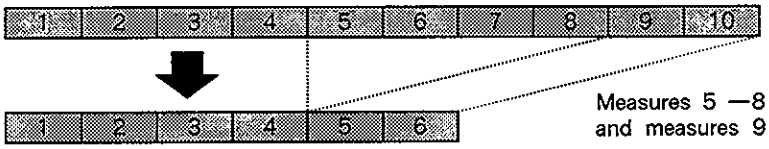
● Press [STOP] to end the procedure.

EDIT 2 : Delete Song Data

☐ Explanation

This operation deletes a specified area of the song data. Use it to remove unwanted song data. You can specify the area to be deleted either by Measure number or by Locate point. However, Rhythm patterns can be deleted only in units of whole measures. This means that they cannot be deleted using a Locate point which is in the middle of a measure.

Example : Delete measures 5—8



Measures 5 —8 of the original data are deleted, and measures 9 and 10 are moved forward.

* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).
* If you use this Delete operation on the Rhythm track so that it becomes shorter than the Phrase tracks, it will no longer be possible to play the Phrase tracks beyond the end of the Rhythm track. If you wish to play to the end of the Phrase tracks, you must lengthen the Rhythm track. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞ P.133).

☐ Procedure

● From Mode 1 standby

① Select the Delete display.

[EDIT] → (Numeric key [2] → Alpha - dial) → [ENTER]

Edit number
Edit name

```
EDIT 2 DELETE
TRK ALL
```

② Specify the Track / Area you wish to delete.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

```
EDIT 2 DELETE
TRK ALL
```

Track

Area to delete

If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.

```
EDIT 2 DELETE
FROM M=   1 FOR ALL
```

Starting measure
Number of measures from starting measure

* It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT 2 DELETE
LOC: BTWN *  AND *
```

Starting Locate number
Ending Locate number

Execute display

```
EDIT 2 DELETE
Sure? >> Press REC
```

③ Execute the Delete operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

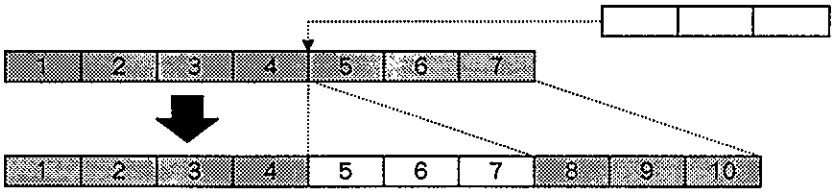
EDIT 3 : Insert Blank Measures

Explanation

This operation inserts blank measures at the specified location. Blank measures will be inserted into the Phrase tracks, but rest patterns will be inserted into the Rhythm track. If you wish to insert blank measures into the Rhythm patterns, you must specify the time signature of the rest patterns.

If you wish to add song data into the middle of a song, use this Insert Measure operation to insert blank measures into all tracks at the desired location, and then record the new song data into the blank measures.

Example : Inserting 3 blank measures at measure 5



*If you use this operation to insert blank measures only into the Phrase tracks, and they become longer than the Rhythm track, it will no longer be possible to play the Phrase tracks beyond the end of the Rhythm track. If you want to play to the end of the Phrase tracks, you must lengthen the Rhythm tracks. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞P.133).

Procedure

● From Mode 1 standby

① Select the Insert Measure display.

[EDIT] → (Numerical Key [3] / Alpha - Dial) → [ENTER]

Edit number / Edit name

```
EDIT 3 INSERT MEAS
TRK ALL
```

② Specify the Track / Measure number / Number of measures you wish to insert, and the Time signature of the rest patterns.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

```
EDIT 3 INSERT MEAS
TRK ALL
```

Track

*The setting for Time signature of rest patterns will be displayed if you select tracks "ALL" or "R".

```
EDIT 3 INSERT MEAS
TIME SIGN  1/4
```

Time signature of rest patterns

```
EDIT 3 INSERT MEAS
FROM M=    1 FOR     1
```

Measure number to insert / Number of blank measures

Execute display

```
EDIT 3 INSERT MEAS
Sure? >> Press REC
```

③ Execute the Insert Measure operation from the Execute display.

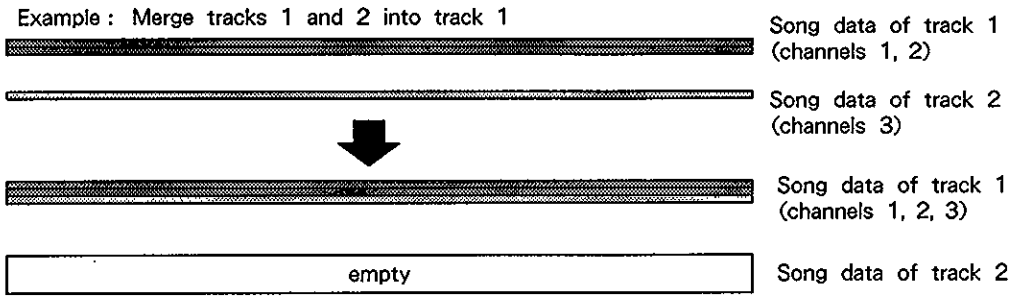
[REC]

● Press [STOP] to end the procedure.

■ EDIT 4 : Combine the Song Data of two Phrase Tracks (Merge)

☐ Explanation

This operation merges (combines) the song data of two Phrase tracks into one of the Phrase tracks, and erases the song data of the other Phrase track. This operation is convenient when you are organizing the song data of the various tracks.


Example : Merge tracks 1 and 2 into track 1
Song data of track 1 (channels 1, 2)
Song data of track 2 (channels 3)
Song data of track 1 (channels 1, 2, 3)
empty
Song data of track 2

* If you merge song data which contains identical MIDI channels, the song data will be mixed.
* If you have made Transmit Channel settings (☞ P.75) to convert the transmit channels of a track, the playback may be different after being merged. If so, make the appropriate Transmit Channel settings again.

☐ Procedure

● From Mode 1 standby

① Select the Insert Measure display.

[EDIT] → (Numerical Key [4] / Alpha - Dial) → [ENTER]

Edit number
Edit name

```
EDIT 4 MERGE
TRK 8+TRK 1 ▶ TRK 8
```

② Specify the two tracks you wish to merge.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

```
EDIT 4 MERGE
TRK 8+TRK 1 ▶ TRK 8
```

destination track
Track to merge (merge destination)
Track to merge (erase)

Execute display

```
EDIT 4 MERGE
Sure? >> Press REC
```

③ Execute the Merge operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

EDIT 5 : Transfer Song Data (Extract)

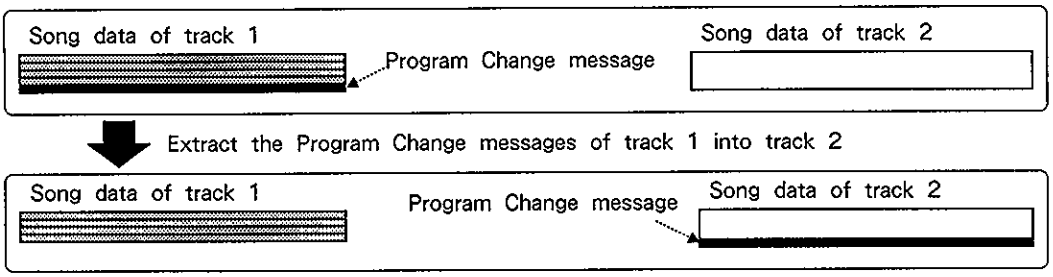
Explanation

This operation extracts the specified song data from a Phrase track, and moves it to the same location in another Phrase track. The Extract operation can be performed individually for each MIDI status. Use it when you need to remove or separate a specific type of MIDI message.

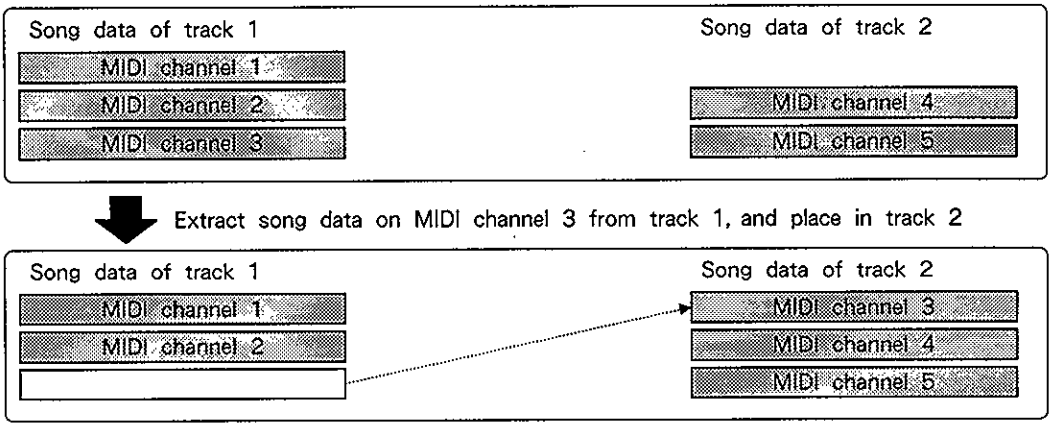
You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	- - -
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	- - -
Hold [SHIFT] and press 4	PB (Pitch Bend)	- - -
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	- - -

For example, if you want to temporarily prevent the sound programs of your MIDI sound module from changing, you can extract the Program Change messages, and mute the Phrase track which contains the Program Change messages.


Song data of track 1
Program Change message
Song data of track 2
Extract the Program Change messages of track 1 into track 2
Song data of track 1
Program Change message
Song data of track 2

If you need to move all song data of a specific MIDI channel to another Phrase track, you can do this by extracting all MIDI messages of that channel from the entire length of the track, and moving them into another Phrase track.


Song data of track 1
MIDI channel 1
MIDI channel 2
MIDI channel 3
Song data of track 2
MIDI channel 4
MIDI channel 5
Extract song data on MIDI channel 3 from track 1, and place in track 2
Song data of track 1
MIDI channel 1
MIDI channel 2
Song data of track 2
MIDI channel 3
MIDI channel 4
MIDI channel 5

If song data already exists in the destination Phrase track, you can select what will happen to it (Replace/Mix). If you select Replace, the result will depend on the MIDI channel setting you select. If the destination Phrase track does not contain song data, this setting will make no difference.

Numeric key input	Transfer method	MIDI channel setting	Operation
1	REPLACE	ALL	Overwrite all song data in the destination with the extracted song data.
		1—16	If song data of the same MIDI channel is present both in the extracted data and in the destination track, only the song data of that channel will be overwritten.
2	MIX	ALL, 1—16	The extracted data will be combined into the destination track.

The Erase operation (☞P.80) is able to erase only one type of MIDI message in one operation. By using the Extract operation, you can leave only a specific type of MIDI message, and erase all other types at once. To do this, set the track to be extracted and the destination track to be the same, and select REPLACE as the transfer method. Next, select the type of MIDI message you wish to keep, and execute the Extract operation.

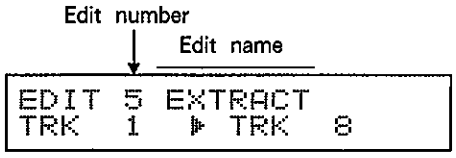
＊If you wish to use Locate points to specify the area, you must first specify the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

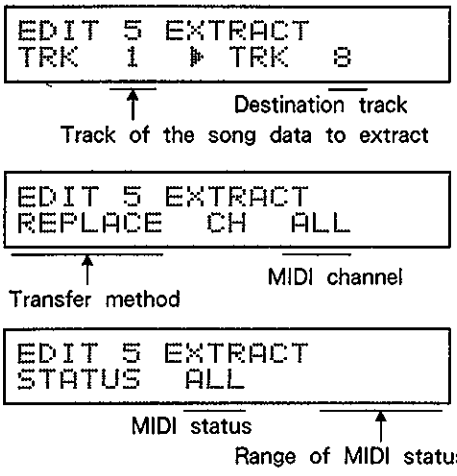
① Select the Extract display.

[EDIT] → (Numeric key [5] / Alpha - dial) → [ENTER]



② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to extract, and the Transfer method.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)



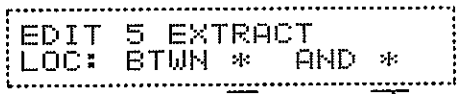
If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to extract

Starting measure

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

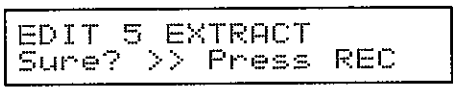


Starting Locate number

Ending Locate number

③ Execute the Extract operation from the Execute display.
[REC]

Execute display



● Press [STOP] to end the procedure.

■ EDIT 6 : Transpose Song Data

☐ Explanation

This operation transposes the specified note numbers of a Phrase track. You can specify a transposition of ± 2 octaves (± 24) in semitones. This operation can be used to transpose a song, or to modulate in the middle of a song.

*Note numbers are handled as 0 (C - 1)—127 (G9). If a Transpose operation would result in a Note number of less than 0 (or greater than 127), that note will be converted to 0 (127). In this case, even if you later perform the opposite transposition, the Note number will not return to its original value.

*Note numbers are used by Polyphonic Aftertouch messages as well as by Note messages, and these will be transposed in the same way.

*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Transpose display.

[EDIT] → (Numerical Key [6] / Alpha - Dial) → [ENTER]

Edit number

Edit name

```
EDIT 6 TRANSPOSE
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / Note range (Range of note numbers) / Amount of transposition / Area you wish to transpose.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀][▶] (move the cursor)

```
EDIT 6 TRANSPOSE
TRK 1-8  CH  ALL
```

Track MIDI channel

```
EDIT 6 TRANSPOSE
NOTE RANGE     0-127
```

Range of note numbers

```
EDIT 6 TRANSPOSE
BIAS   0
```

Amount of transposition

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to transpose

```
EDIT 6 TRANSPOSE
FROM M=   1 FOR ALL
```

Starting measure

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT 6 TRANSPOSE
LOC: BTWN *  AND *
```

Starting Locate number

Ending Locate number

Execute display

```
EDIT 6 TRANSPOSE
Sure? >> Press REC
```

③ Execute the Transpose operation from the Execute display.
REC

● Press STOP to end the procedure.

■ EDIT 7 : Change Velocity

☐ Explanation

The Change Velocity operation converts the velocity values in the specified area of a Phrase track. Various ways to modify the velocity are provided. (Numbers below the decimal point are rounded up or down.)

$$V = (V_0 - 64) \times MAGNIFY + \{ KF \times (note\ \# - 64) + BIAS \} \times (\Delta t / SPAN)^N + 64$$

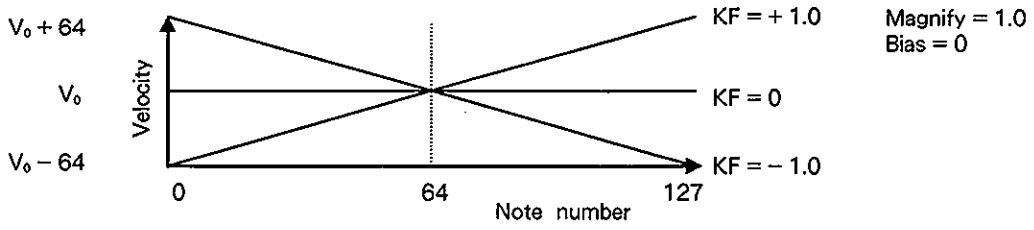
Meaning of symbol	Value
V : Resulting velocity after conversion	– – –
V_0 : Velocity before conversion	– – –
MAGNIFY : : Velocity conversion ratio	0.0—2.0
KF : Rate of velocity change relative to Note number	– 1.0— + 1.0
note #	– – –
BIAS : Value added to velocity	– 99— + 99
$(\Delta t / SPAN)^N$: Whether or not to modify velocity with time (N = conversion mode)	GRADUAL (modify with time) IMMEDIATE (don't modify with time)

These parameters allow you to use the following four types of effect in various combinations.

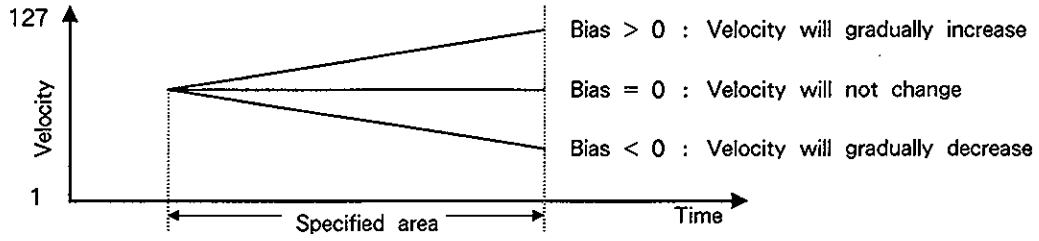
◆ Magnify expands or contracts the overall velocities around the central value of 64. This allows you to tighten up differences in velocity, or to broaden the differences in velocity to create wider variations in volume. For example if you wish to reduce the velocity differences between notes by one - half, set the Magnify parameter to 0.5.
Value of Magnify: less diversity < 1.0 (no change) < greater diversity

◆ Bias adjusts the overall volume (velocity). If you wish to increase all velocities by 10, set Bias to +10.

◆ KF lowers (or raises) the velocity by greater amounts for higher pitches (note numbers). The change in velocity around note number 64 (i.e., the slope) is determined by the KF value. When KF is set to 0, there will be no change.



◆ You can set the conversion mode to GRADUAL to create fade in/out effects by making the velocities gradually greater (or smaller). The Bias setting determines the slope of the change in velocity.



*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

*Velocity values are limited to 1—127. If a Change Velocity operation would result in a velocity value outside this range, such notes will be given a velocity of 1 or 127. In such cases, even if you later execute the opposite Change Velocity operation, the original value will not be recovered.

☐ Procedure

● From Mode 1 standby

① Select the Change Velocity display.

[EDIT] → (Numeric key [7] / Alpha - dial) → [ENTER]

Edit number
Edit name

```
EDIT 7 CHANGE VELO
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / Note range (Range of note numbers) / Area you wish to Change Velocity, and set the Magnify / KF / Bias / Conversion mode parameters.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◄][►] (move the cursor)

```
EDIT 7 CHANGE VELO
TRK 1-8  CH  ALL
```
Track MIDI channel

```
EDIT 7 CHANGE VELO
NOTE RANGE     0-127
```
Range of note numbers

```
EDIT 7 CHANGE VELO
MAGNI 1.0   KF.  0.0
```
Magnify KF

```
EDIT 7 CHANGE VELO
BIAS   0   IMMEDIATE
```
Bias Conversion mode

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be converted

```
EDIT 7 CHANGE VELO
FROM M=   1 FOR ALL
```
Starting measure ↑

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT 7 CHANGE VELO
LOC: BTWN *  AND *
```
Starting Locate number ↑
Ending Locate number

Execute display

```
EDIT 7 CHANGE VELO
Sure? >> Press REC
```

③ Execute the Change Velocity operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

■ EDIT 8 : Change MIDI Channels

☐ Explanation

This operation converts a specified MIDI channel in the song data of a Phrase track into a different MIDI channel. You can specify individual types of MIDI status for channel conversion.

You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	- - -
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	- - -
Hold [SHIFT] and press 4	PB (Pitch Bend)	- - -
Hold [SHIFT] and press 5	EX (Exclusive)	ID number

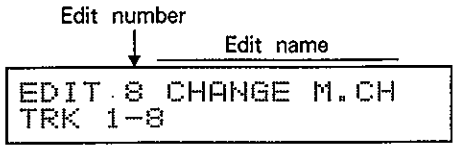
* If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).
* If the Phrase track to which this operation is applied contains song data of the same MIDI channels as the newly converted data, the song data will be combined.
* If you wish to convert MIDI channels only during playback, refer to "FUNC 12: Transmit channel" (☞ P.75).

☐ Procedure

● From Mode 1 standby

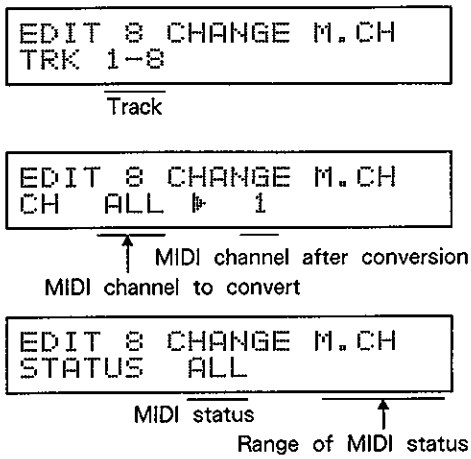
① Select the Change MIDI Channel display.

[EDIT] → (Numerical Key [8] / Alpha - Dial) → [ENTER]



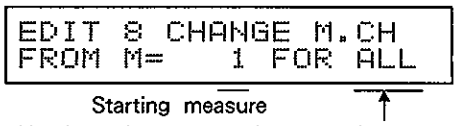
② Select the Track / MIDI status (Range) / Area / MIDI channel you wish to convert, and specify the MIDI channel to which it will be converted.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)



If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

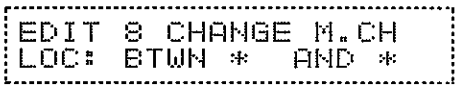
Area to be converted



Starting measure

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.



Starting Locate number

Ending Locate number

Execute display

③ Execute the Change MIDI Channel operation from the Execute display.
[REC]

● Press [STOP] to end the procedure.

■ EDIT 9 : Correct Note Timing (Quantize)

☐ Explanation

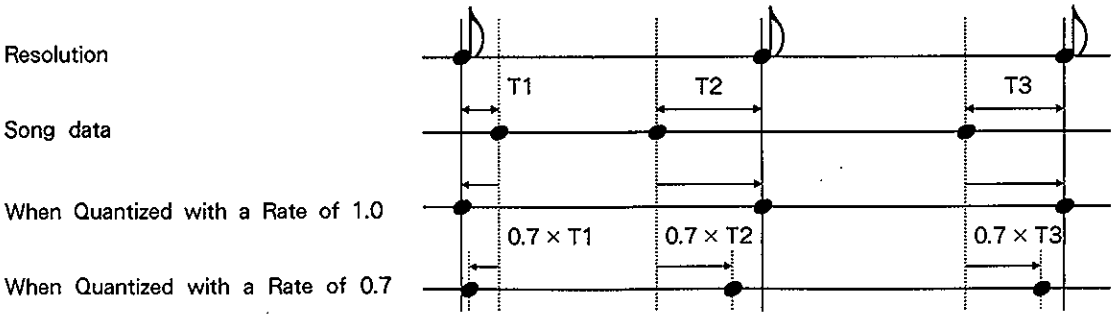
This operation quantizes the timing of Note messages (i.e., adjusts them to the nearest specified interval). When data is recorded using Realtime Recording, the recorded data will sometimes be slightly off the beats of the Rhythm track. The Quantize operation corrects these deviations in timing.

＊The Quantize operation corrects the timing of Note messages, but does not affect the timing of other MIDI messages. Be aware that if MIDI messages other than Note messages have been recorded, their timing relative to the notes will change.

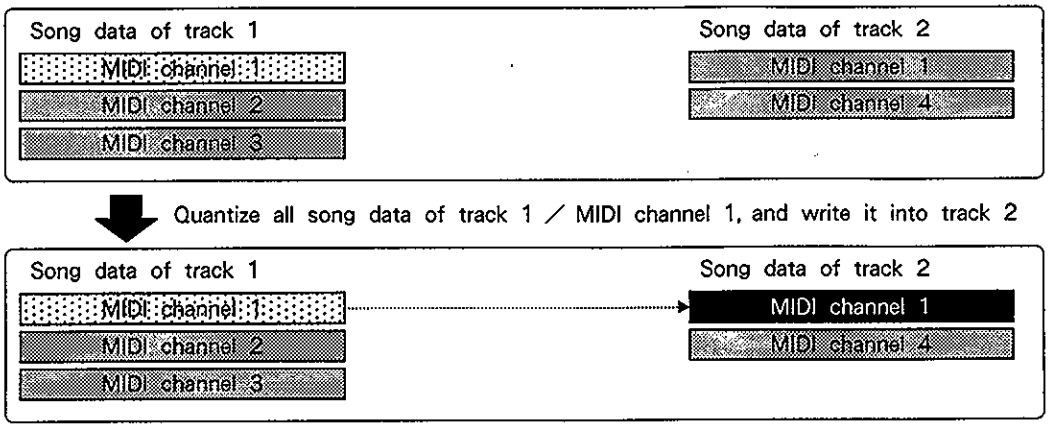
The Resolution setting allows you to Quantize to the following note values. Select the smallest note value used in your song.

(64th note)

The Quantize Rate setting determines the relative amount of correction that will be applied to each note. The Quantize Rate can be set over a range of 0.0—1.0. For a Rate of 1.0, notes will be moved to the exact timing specified by the Resolution, which may result in a rather mechanical - sounding performance. By lowering the Rate below 1.0, you can Quantize the notes while preserving the natural variations in timing.



When quantizing a single specific Phrase track, you can write the song data being quantized into another Phrase track. In this case, the unquantized song data will be preserved, but all song data of the same MIDI channel and area in the destination track will be erased and overwritten.


Song data of track 1
MIDI channel 1
MIDI channel 2
MIDI channel 3
Song data of track 2
MIDI channel 1
MIDI channel 4
Quantize all song data of track 1 / MIDI channel 1, and write it into track 2
Song data of track 1
MIDI channel 1
MIDI channel 2
MIDI channel 3
Song data of track 2
MIDI channel 1
MIDI channel 4

＊It is not possible to restore Quantized song data to its previous state.

☐ Procedure

● From Mode 1 standby

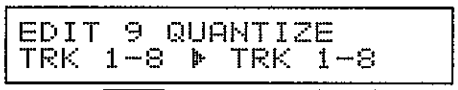
① Select the Quantize display.

[EDIT] → (Numeric key [9] / Alpha - dial) → [ENTER]

Edit number
Edit name

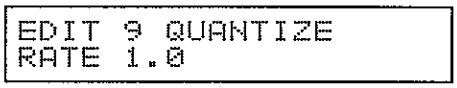
② Select the Track / MIDI channel / Area you wish to Quantize, and specify the Resolution / Rate.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)



Track to be Quantized
Track after Quantization

MIDI channel
Resolution



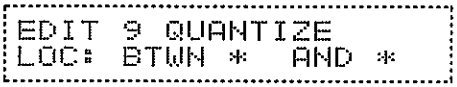
Rate

Area to be Quantized

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

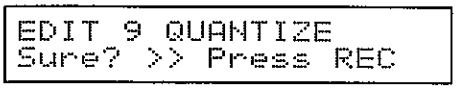
Starting measure
Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Starting Locate number
Ending Locate number

Execute display



③ Execute the Quantize operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

■ EDIT 10 : Copy Song Data

☐ Explanation

This operation copies a specified area of song data, and is convenient when you need to use the same phrase several times. You can also copy from another song.

It is also possible to replace song data in a Phrase track with song data from the Rhythm track. There are some restrictions on input methods for Rhythm patterns, and it is not possible to add subtle changes in timing and velocity. In order to add such touches, copy the data to a Phrase track and then modify it.

However even if you will be playing the drum part only from a Pattern track, do not erase the song data from the Rhythm track. In such cases, you can either mute the Rhythm track, or replace the Rhythm patterns of the Rhythm track with rest patterns.

Copy can be performed between the following tracks.

Copy source track	Copy destination track	Remarks
ALL	ALL	The song data of the specified area will be rewritten.
1—8	1—8	You can copy individual MIDI channels, and can specify the method of copying.
R	1—8, R	The song data of the specified area will be rewritten. It is not possible to copy the Rhythm track from another song. To copy the Rhythm track or Rhythm patterns from another song, refer to "UTIL 4 : Rhythm pattern copy" (☞P.129) or "MODE 3 : Link" (☞P.144). When the Rhythm track is copied into a Phrase track, the following data will be copied. MIDI channel and note numbers of each rhythm instrument (FUNC 5) Velocity values of each Velocity code (FUNC 4) Gate times of each Rhythm pattern (1/2 the resolution)
T	T	The tempo data of the specified area will be rewritten.

*If you copy only a Phrase track (or the Tempo track) so that it becomes longer than the Rhythm track, rest patterns will be added to the Rhythm track according to the new length of the track you copied. This means that you can playback to the end of the Phrase track without having to lengthen the Rhythm track later.

If song data exists in the copy destination Phrase track, you can select the method of copying (Replace or Mix). If you select Replace, the results will depend on the MIDI channel you specify. If the copy destination Phrase track does not contain song data, the copy method will make no difference.

Numeric key input	Copy method	MIDI channel setting	Operation
1	REPLACE	ALL	All song data in the copy destination will be replaced by the copied song data.
		1—16	If song data of the same MIDI channel is present in both the copy source and the copy destination, only the song data of that channel will be overwritten.
2	MIX	ALL, 1—16	The copied song data will be combined with the copy destination track.

☐ Procedure

● From Mode 1 standby

① Select the Copy display.

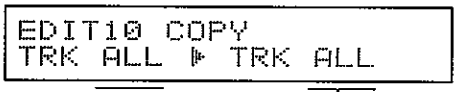
EDIT → (Numeric key 1 → 0 / Alpha - dial) → ENTER

Edit number
Edit name

② Select the Song number / Track / MIDI channel / Area you wish to Copy, and specify the copy destination measure, the copy method, and the number of copies.

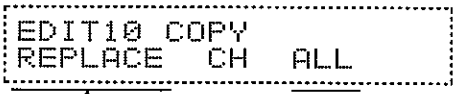
Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
ENTER (finalize values)
◀ ▶ (move the cursor)

Song number to be copied
Copy destination song number (the currently selected song)



Track to be copied
Copy destination track

*The setting displays for Copy Method and MIDI channel will appear when you specify that a Phrase track be copied.



Copy method
MIDI channel

Area to be copied

If you wish to use Locate points to specify the area, press LOC to change the selection display. Each time you hold SHIFT and press LOC, the selection display will alternate.

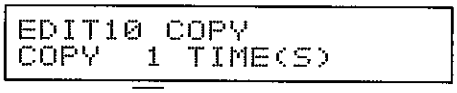
Starting measure
Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

Starting Locate number
Ending Locate number

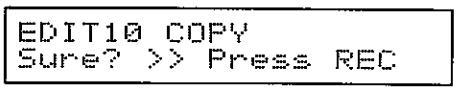
*You can use Locate points to specify the copy destination measure as well, just as when specifying the copy area.

Copy destination measure



Number of copies

Execute display



③ Execute the Copy operation from the Execute display.

REC

● Press STOP to end the procedure.

EDIT 11 : Change Gate Time

☐ Explanation

The Change Gate Time operation converts the Gate time values in the specified area of a Phrase track. You can modify the Gate time in various ways. (Numbers below the decimal point will be rounded up or down.)

$$G = G_0 \times MAGNIFY + \{ KF \times (note\ \# - 64) + BIAS \} \times (\Delta t \,/\, SPAN)^N$$

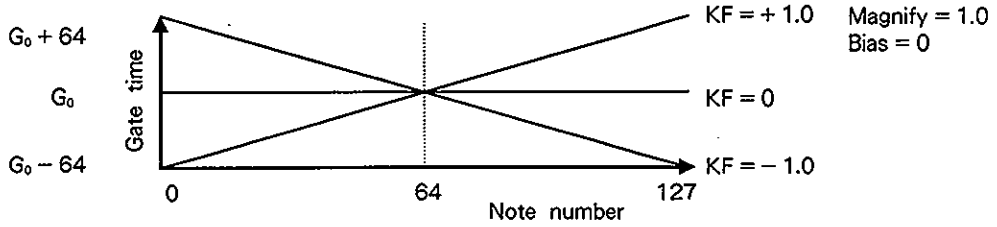
Meaning of symbol	Value
V : Resulting Gate time after conversion	– – –
V_0 : Gate time before conversion	– – –
MAGNIFY : Gate time conversion ratio	0.0—2.0
KF : Rate of gate time change relative to Note Number	– 1.0— + 1.0
note #	– – –
BIAS : Value added to gate time	– 99— + 99
$(\Delta t \,/\, SPAN)^N$: Whether or not to modify gate time with time (N = conversion mode)	GRADUAL (modify with time) IMMEDIATE (don't modify with time)

These parameters allow you to use the following four types of effect in various combinations.

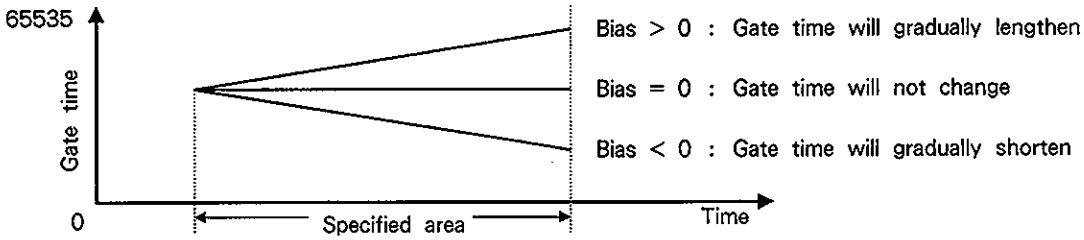
◆ Magnify expands or contracts the overall Gate times. This allows you to create staccato or slurs (ties), or to adjust the Gate time to suit the playback tempo. For example, if you wish to reduce the Gate time to a half, set the Magnify parameter to 0.5.
Value of Magnify: shorter Gate time < 1.0 (no change) < longer Gate time

◆ Bias lengthens (shortens) the Gate time by a fixed amount. If you wish to make all Gate times 10 clocks longer, set Bias to +10.

◆ KF lengthens (or shortens) the Gate time by greater amounts for higher pitches (note numbers). The change in Gate time around note number 64 (i.e., the slope) is determined by the KF value. When KF is set to 0, there will be no change. For example, the notes of a stringed instrument such as piano and guitar have shorter Gate times for higher notes. In such cases, you can set KF below 0 so that Gate times will decrease as the pitch increases. In this way, set KF to a value suitable for the sound data you are using.



◆ You can make the Gate time gradually become longer (or shorter) by setting the conversion mode to GRADUAL. The Bias setting will determine the slope of the change in Gate time.


65535
Gate time
0
Specified area
Time
Bias > 0 : Gate time will gradually lengthen
Bias = 0 : Gate time will not change
Bias < 0 : Gate time will gradually shorten

*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

*Gate time values are limited to 1—65535. If a Change Gate Time operation would give a note a Gate time value outside this range, such notes will be given a Gate time of 1 or 65535. In such cases, even if you later execute the opposite Change Gate Time operation, the original value will not be recovered.

☐ Procedure

● From Mode 1 standby

① Select the Change Gate Time display.

[EDIT] → (Numeric key [1] → [1] / Alpha - dial) → [ENTER]

Edit number

Edit name

```
EDIT11 CHANGE G.T.
TRK 1-8  CH  ALL
```

② Specify the Track / MIDI channel / Note range (Range of note numbers) / Area you wish to Change Gate time, and set the Magnify / KF / Bias / Conversion mode parameters.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)

```
EDIT11 CHANGE G.T.
TRK 1-8  CH  ALL
```

Track MIDI channel

```
EDIT11 CHANGE G.T.
NOTE RANGE     0-127
```

Range of note numbers

```
EDIT11 CHANGE G.T.
MAGNI 1.0   KF.  0.0
```

Magnify KF

```
EDIT11 CHANGE G.T.
BIAS   0    IMMEDIATE
```

Bias Conversion mode

If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be changed

```
EDIT11 CHANGE G.T.
FROM M=   1 FOR ALL
```

Starting measure

Number of measures from starting measure

*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

```
EDIT11 CHANGE G.T.
LOC: BTWN *  AND *
```

Starting Locate number

Ending Locate number

Execute display

```
EDIT11 CHANGE G.T.
Sure? >> Press REC
```

③ Execute the Change Gate Time operation from the Execute display.

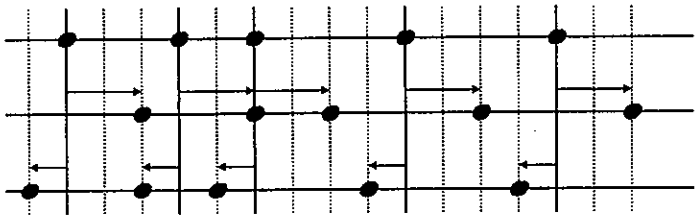
[REC]

● Press [STOP] to end the procedure.

■ EDIT 12 : Shift Timing (Shift Clock)

☐ Explanation

This operation shifts the timing of MIDI messages recorded in a Phrase track (or Tempo track), in units of one clock. For example if you are using a MIDI sound module that tends to be slow in responding to Note - on messages, you could slide the timing of the Note messages slightly forward in time, to keep the timing of each instrument together.



You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
0	ALL (all MIDI status)	− − −
9	NOTE	Note number (0—127)
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 2	PG (Program Change)	Program number (1—128)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	− − −
Hold [SHIFT] and press 4	PB (Pitch Bend)	− − −
Hold [SHIFT] and press 5	EX (Exclusive)	ID number
Hold [SHIFT] and press 6	TU (Tune Rquest)	− − −

*If you shift MIDI messages to a point before the beginning of the song, the MIDI messages will pile up at the beginning of the song. If you wish to shift to a point before the beginning of the song, first insert some blank measures at the beginning (☞P.83, "EDIT 3: Insert measure").

*MIDI messages shifted to a point later then the end of the Rhythm track will no longer be playable. If you wish to play to the end of the data, you must lengthen the Rhythm track. If you wish to shorten the Phrase tracks to the same length as the Rhythm tracks, refer to "UTIL 7: Data reduce" (☞P.133).

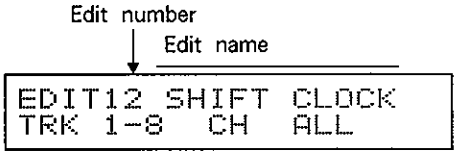
*If you wish to use Locate points to specify the area, you must first set the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Shift Clock display.

[EDIT] → (Numeric key [1] → [2] / Alpha - dial) → [ENTER]



② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to Shift clock, and Bias parameter.

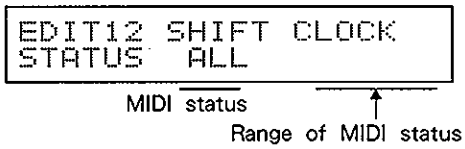
Alpha - dial / Numeric keys (modify values)

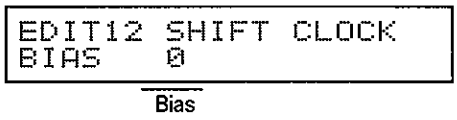
Track keys (select tracks)

[ENTER] (finalize values)

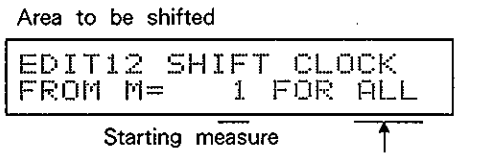
[◀][▶] (move the cursor)

Bias is the number of clocks (− 99—+99) to shift the data. Negative values (−) will shift the data forward, and positive (+) values will shift the data backward.

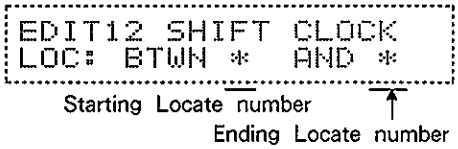




If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.



*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Execute display

③ Execute the Shift Clock operation from the Execute display.

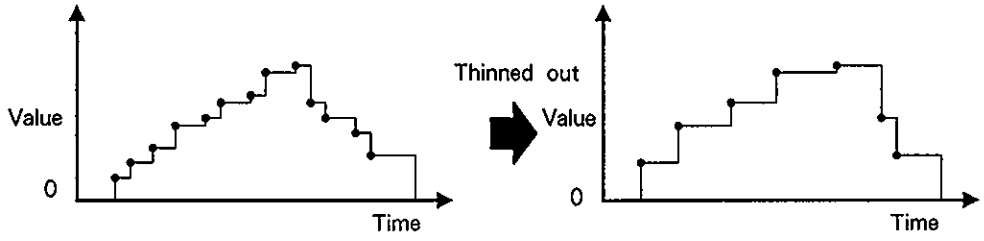
[REC]

● Press [STOP] to end the procedure.

■ EDIT 13 : Thin out MIDI Messages (Data Thin)

☐ Explanation

Using MIDI messages such as Aftertouch, Control Change, and Pitch Bend can result in unexpectedly large amounts of data, since these messages are transmitted each time the controller value changes. The Data Thin operation allows you to thin out such data in an unobtrusive way, reducing the amount of data yet preserving most of the expressiveness, and allowing you to make the best use of memory.



You can specify the following types of MIDI status. For some types of MIDI status, you can also specify the range.

Numeric key input	MIDI status	Range
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	Note number (0—127)
Hold [SHIFT] and press 1	CC (Control Change)	Control number (0—127)
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	– – –
Hold [SHIFT] and press 4	PB (Pitch Bend)	– – –

You can specify Value (0—99) and Time (0—99) to determine how the thinning process will take place. The initial settings of these parameters (Value = 6, Time = 6) are good guidelines.
For more drastic thinning out of MIDI messages that change abruptly, increase the Value.
For more drastic thinning out of MIDI messages that change smoothly, increase the Time.

*The best settings for this Data Thin operation will depend on the tempo and on the way in which the MIDI messages change, and are difficult to predict. We suggest that you make several copies of the song data, and experiment.

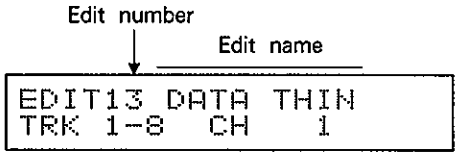
*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

① Select the Data Thin display.

[EDIT] → (Numeric key [1] → [3] / Alpha - dial) → [ENTER]



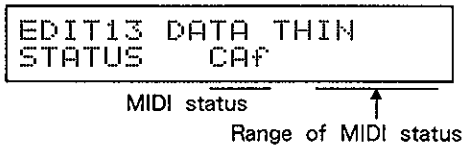
② Specify the Track / MIDI channel / MIDI status (Range) / Area you wish to thin out, and set the Value / Time parameters.

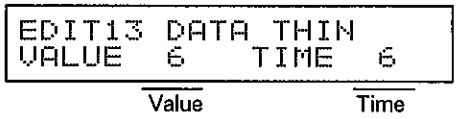
Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

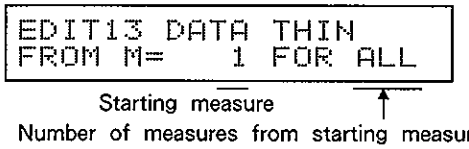
[◀][▶] (move the cursor)



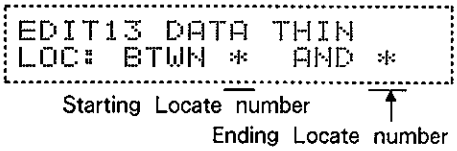


If you wish to use Locate points to specify the area, press [LOC] to change the selection display. Each time you hold [SHIFT] and press [LOC], the selection display will alternate.

Area to be thinned



*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.



Execute display

③ Execute the Data Thin operation from the Execute display.

[REC]

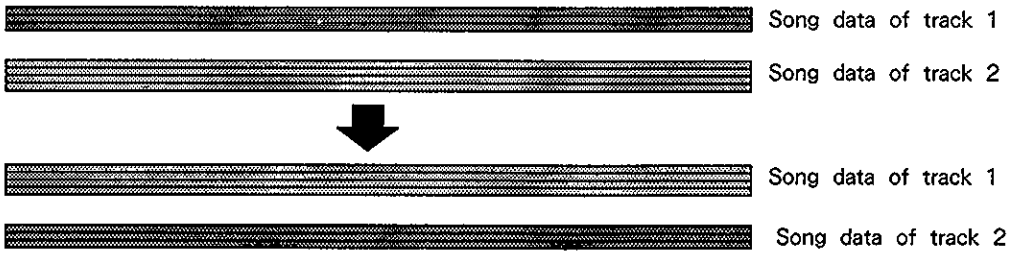
● Press [STOP] to end the procedure.

EDIT 14 : Exchange Phrase Tracks

Explanation

This operation exchanges the song data of two Phrase tracks. The output assign (FUNC11) and transmit channel (FUNC 12) settings of each track are also exchanged. This operation is convenient when you need to organize the song data of various tracks.

Example : the result of exchanging tracks 1 and 2



Procedure

● From Mode 1 standby

① Select the Track Exchange display.

[EDIT] → (Numeric key [1] → [4] / Alpha - dial) → [ENTER]

Edit number

Edit name

```
EDIT14 TRK EXCHANGE
       TRK 1 ◀▶ 8
```

② Select the Tracks you wish to exchange.

Alpha - dial / Numeric keys (modify values)

Track keys (select tracks)

[ENTER] (finalize values)

[◀][▶] (move the cursor)

```
EDIT14 TRK EXCHANGE
       TRK 1 ◀▶ 8
```

Tracks to be exchanged

Execute display

```
EDIT14 TRK EXCHANGE
Sure? >> Press REC
```

③ Execute the Track Exchange operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

■ EDIT 15 : Convert MIDI Messages (Multi Edit)

☐ Explanation The Multi Edit operation converts the MIDI messages in a Phrase track. The Multi Edit operation has two modes: Modify and Shift Number.

< Modify > This allows you to Compand (compress/expand) or Reverse MIDI data in the specified area. You can specify the following types of MIDI status. Some types allow you to specify the range.

Numeric key input	MIDI message	Range
9	NOTE (Note number)	0—127
Hold [SHIFT] and press 9	VELO (Note On Velocity)	1—127
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch Value)	0—127
Hold [SHIFT] and press 1	CC (Control Change Value)	0—127
Hold [SHIFT] and press 3	CAf (Channel Aftertouch Value)	– – –
Hold [SHIFT] and press 4	PB (Pitch Bend Value)	– – –

The note numbers of Note On messages and Polyphonic Aftertouch will be converted using 64 as the basic value. MIDI data other than note numbers will be converted using minimum value as the basic value.

◆ Compand (compress/expand)

If you have selected Compand, you can specify the Magnify parameter (the conversion ratio: 0.0—2.0). To double the values, set Magnify to 2.0. (Values below the decimal point will be rounded up or down.)

When transforming data other than note numbers, you can increase (expand) or decrease (compress) the changes in data value. For example by expanding Velocity, you can increase the changes in volume (i.e., create a wider dynamic range).

The result of transforming note numbers will unexpected. By taking advantage of this when you have run out of ideas, you may find something which you can use.

* If you compress an "on/off" Control Change message (such as Hold pedal), it will not longer perform correctly. Also, expanding it will have no effect.
* Values which would exceed their range as a result of being expanded (or compressed) will be limited to their maximum (or minimum) value. In such cases, applying the opposite operation afterwards will not restore the data to its original state.

◆ Reverse

This operation will invert the values of the MIDI message in the specified area. Reversing note numbers has little musical meaning, but as with Companding, may result in interesting ideas or effects.

< Shift Number >

The Shift Number operation converts a specified type of MIDI message into another type of MIDI message. You can specify the following types of MIDI message.

Numeric key input	MIDI message	Range
9	NOTE (Note number)	0—127
Hold [SHIFT] and press 9	ALL Oct.(Note numbers in each octave)	0—127
Hold [SHIFT] and press 1	CC (Control number)	0—127
Hold [SHIFT] and press 2	PG (Program number)	1—128

Select "NOTE" if you wish to convert a specified note number into a different note number. If you wish to convert a specified note number and all notes at octave intervals from it into different note numbers, select "ALL Oct". This can be used for modal conversions (major/minor).

Setting example	Conversions
Use NOTE # to convert A4 (57) into A # 4 (58)	A4→A # 4
Use ALL Oct. to convert A4 (57) into A # 4 (58)	A −→A # −, A0→A # 0, A1→A # 1, A2→A # 2, A3→A # 3, A4→A # 4, A5→A # 5, A6→A # 6, A7→A # 7, A8→A # 8

Select CC (Control Change) if you wish to convert a specified control function into a different control function. For example you might convert Expression messages into Volume messages.
By selecting PG (Program Change), you can convert all occurrences of a specified Program Change message to a Program Change message of a different number.

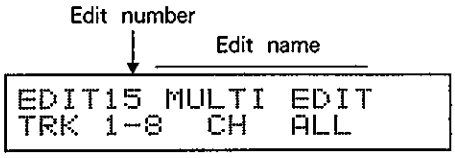
＊If you wish to use Locate points to specify the area, you must first specify the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

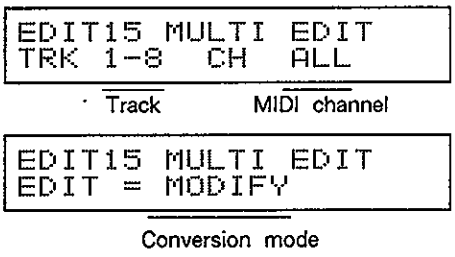
① Select the Multi Edit display.

[EDIT] → (Numerical Key [1] → [5] / Alpha - Dial) → [ENTER]



② Select the Track / MIDI channel you wish to edit, and specify the Conversion mode.

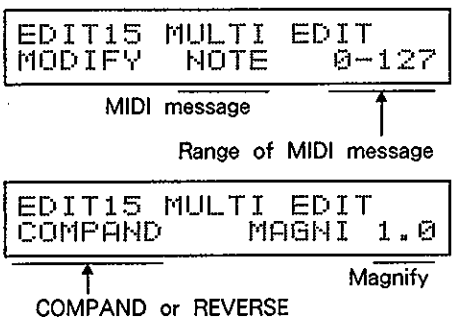
Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀] [▶] (move the cursor)



【Step ③ when MODIFY is selected】

③ Select the MIDI Message / Range to be converted, and select COMPAND or REVERSE. If you have selected COMPAND, set the Magnify value.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize the value)
[◀] [▶] (move the cursor)



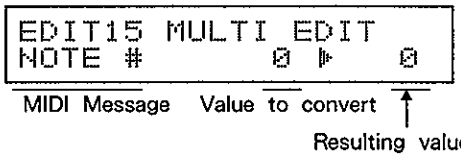
【Step ③ when SHIFT # (Shift Number) is selected】

③ Select the MIDI Message / Value to be converted, and specify the value to which it will be converted.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize the value)

[◀][▶] (move the cursor)

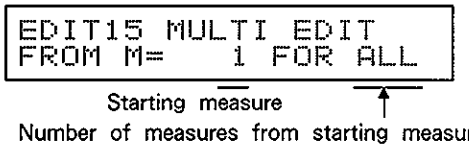


④ Specify the area to be converted

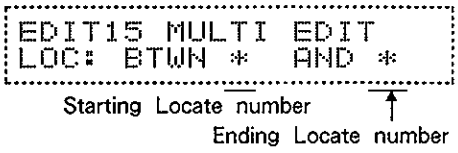
Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◀][▶] (move the cursor)

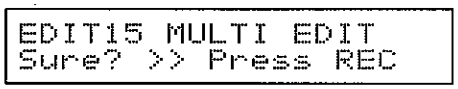


If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.



*It is not possible to use both Measures and Locate points to specify the area. The last-specified one will be used.

Execute display



⑤ Execute the Multi Edit operation from the Execute display.

[REC]

● Press [STOP] to end the procedure.

MICROSCOPE

Microscope mode allows you to check or modify individual MIDI messages in the song data of a Phrase track or the Tempo track. Microscope mode provides five Micro editing operations and three Step editing operations.

Micro Edit: These operations modify only the specified MIDI message, and have no effect on other MIDI messages.

μ EDIT 1:	Modify a MIDI Message	(Change Event)
μ EDIT 2:	Erase a MIDI Message	(Erase Event)
μ EDIT 3:	Create a MIDI Message	(Create Event)
μ EDIT 4:	Move a MIDI Message	(Move Event)
μ EDIT 5:	Memorize and Copy a MIDI Message	(Event Memory / Place Event)

Step Edit: When these operations are used to modify a MIDI message, subsequent MIDI messages will be moved forward or back in time.

sEDIT 1:	Modify the Step Time	(Change Step)
sEDIT 2:	Delete a MIDI Message	(Delete Step)
sEDIT 3:	Insert a MIDI Message	(Insert Step)

■ View a MIDI Message (View Field)

□ Explanation

In Microscope mode, the display will show the settings of individual MIDI messages in a Phrase track (or the Tempo track). The MIDI channels and MIDI messages displayed in Microscope mode are determined by the View Field settings. Initially, these will be set to display all MIDI messages (except Tune Request) of all MIDI channels.

You can specify the following types of MIDI status.

Display	MIDI status
NOTE	Note
PAf	Polyphonic Aftertouch (Polyphonic Key Pressure)
CC	Control Change (0—120), Channel Mode message
PG	Program Change
CAf	Channel Aftertouch (Channel Key Pressure)
PB	Pitch bend
EX	Exclusive

*When you are using the Step Edit function, all MIDI messages will be displayed, regardless of the View Field setting.

*Tempo data in the Tempo track will be always be displayed, regardless of the View Field setting.

*Changes you make to the View Field settings will be lost when the power is turned off. If you wish to keep your modified settings, save them to disk in a configuration file. (☞ P.164, "3: Saving a configuration data"). If you wish to use the settings from a configuration file, refer to "Play" (☞ P.14) or "2: Loading a configuration file" (☞ P.163).

□ View Field settings

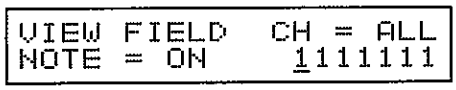
● From standby

① Move to the Microscope display.

[MICROSCOPE]

② Move to the View Field display.

Hold [SHIFT] and press [MICROSCOPE]

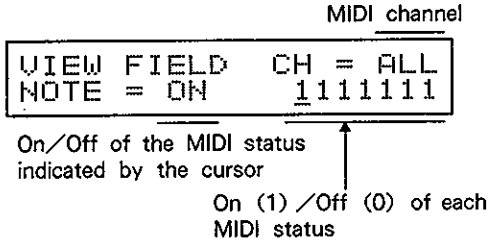


③ Select the MIDI channel and MIDI status you wish to view.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◄][►] (move the cursor)


MIDI channel
VIEW FIELD CH = ALL
NOTE = ON 1111111
On/Off of the MIDI status indicated by the cursor
On (1) /Off (0) of each MIDI status

*If you use the Numeric keys to specify On (1) / Off (0), the value will be finalized immediately.

● To move to the Microscope display, press [ENTER] or [MICROSCOPE].

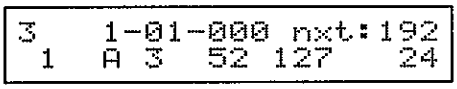
● To return to the standby display, press [STOP].

☐Display MIDI messages

● From standby, or from a Microscope editing display

① Move to the Microscope display.

[MICROSCOPE]



② Select the Track / Measure / Beat / Clock to display the MIDI message.

Alpha - dial / Numeric keys (modify values)

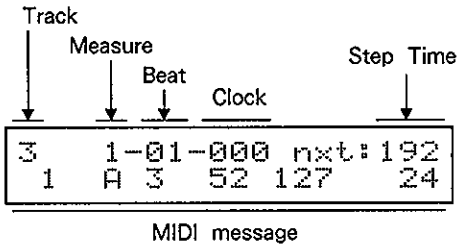
[ENTER] (finalize values)

Track keys (select tracks)

[◄][►] (move the cursor)

[SKIP] (move to the next MIDI message)

[RESET] (move to the previous MIDI message)



*The track keys allow you to select tracks regardless of the cursor position.

< Locate Jump >

You can use the Locate Jump function to display the MIDI message at a Locate point. Press [LOC] and use the Alpha - dial / Numeric keys to select a Locate number, and then press [ENTER]. For details, refer to "The Locate function" (☞P.18).

< About the display >

Depending on the type of MIDI status, the display will show the following.

MIDI status	Display
Note	MIDI channel/Note name/Note number/Velocity/Gate time
Polyphonic Aftertouch	MIDI channel/PAf/Note number/Value
Control Change	MIDI channel/CC/Control number/Value
Program Change	MIDI channel/PG/Program number
Channel Aftertouch	MIDI channel/CAf/Value
Pitch Bend	MIDI channel/PB/Value
Exclusive	EX/F0—(hexadecimal)—F7
Tune Request	TU
Rest Data	CH. REST

Step time is the number of clocks until the next MIDI message. If this is greater than 999, the display will show "FAR". If the message is the last message in the track, the display will show "END".

A "*" displayed at the left of the MIDI status name (or note name) indicates that other MIDI messages exist at the same location (measure / beat / clock).

*If you wish to display Tune Request messages, hold [SHIFT] and rotate the Alpha - dial to select the measure / beat /clock. You can use the same operation to see all MIDI messages of all MIDI channels regardless of the View Field setting.

* For Exclusive messages, only the first five bytes will be displayed. If you wish to see the rest of the data, refer to the following function " μ EDIT 1: Change Event".
* If you use the Microscope to make a large number of modifications, the measure / beat / clock movement may become slower. In such cases, execute the Data Reduce operation (☞P.133).

< Transmitting a MIDI message >

When you press [PLAY], the currently selected MIDI message will be transmitted from MIDI OUT as determined by the settings of "FUNC 11: Output Assign" (☞P.74) and "FUNC 12: Transmit Channel" (☞P.75).

● Press [STOP] to exit the function.

■ μ EDIT 1 : Modify a MIDI Message (Change Event)

☐ Explanation

This operation allows you to modify a MIDI message. However it is not possible to change the type of MIDI message, such as changing a Program Change message into a Control Change message.

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After the last data (right-most) value in the MIDI message has been finalized, you will return to the Microscope display.
Continuous mode	After the last data (right-most) value in the MIDI message has been finalized, you will advance to the next MIDI message. Use this mode when you wish to modify two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to modify.

② Move to the Change Event display.

[EDIT] → [1] → [ENTER] (Single mode)

[EDIT] → [1] → Hold [SHIFT], and press [ENTER] (Continuous mode)

```
MEDIT 1 CHANGE Event
 1   C 4   60   64    86
```

Displayed to indicate Continuous mode

```
1     1-01-000 *CHANGE
 1   C 4   60   64    86
```

③ Modify the MIDI message.

Alpha-dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◀] [▶] (move the cursor)

To change a Note message to a rest (CH.REST), place the cursor on the note number, and hold [SHIFT] and press Numeric key [9].

< When Continuous mode is selected >

[SKIP] (finalize the modified values, and display the next MIDI message)

[RESET] (finalize the modified values, and display the previous MIDI message)

< Modifying Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.

Hold [SHIFT] and press Numeric keys [0] — [5] (enter A—F)

Hold [PAUSE] and press [▶] (insert a value of 00)

Hold [PAUSE] and press [◀] (delete)

You can add data by entering a value at the position of F7.

* Exclusive message can be entered only from the Numeric keys.
* It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ μ EDIT 2 : Erase a MIDI Message (Erase Event)

☐ Explanation

This operation erases a MIDI message.

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After Erase has been executed, you will return to the Microscope display.
Continuous mode	After Erase has been executed, you will advance to the next MIDI message. Use this mode when you wish to erase two or more MIDI messages.

*An erased MIDI message (except for an Exclusive message) will be temporarily stored as event memory 0. If you wish to restore an erased MIDI message, refer to "μ EDIT 5: Place Event" (☞P.119).

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to erase.

② Move to the Erase Event display.

[EDIT] → [2] → [ENTER] (Single mode)

[EDIT] → [2] → Hold [SHIFT] and press [ENTER] (Continuous mode)

< When Continuous mode is selected >

[SKIP] (display the next MIDI message)

[RESET] (display the previous MIDI message)

```
MEDIT 2 ERASE Event
 1   C 4   60   64    86
```

Single mode display

```
Press REC to  ERASE
 1   C 4   60   64    86
```

Continuous mode display

```
1    1-01-000 *ERASE
 1   C 4   60   64    86
```

③ Execute the Erase operation.

*Even if you have selected Continuous mode, you will return to the Microscope display when you erase the last MIDI message in a track.

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ μ EDIT 3 : Create a MIDI Message (Create Event)

☐ Explanation

This operation allows you to create a new MIDI message. To create a chord, you can insert Note messages at the same location (measure / beat / clock).

You can make settings for each type of MIDI message as follows.

Numeric key input	MIDI status	Setting items
9	NOTE	MIDI channel/Note name (Note number) / Velocity/Gate time
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	MIDI channel/PAf/Note number/Value
Hold [SHIFT] and press 1	CC (Control Change)	MIDI channel/CC/Control number/Value
Hold [SHIFT] and press 2	PG (Program Change)	MIDI channel/PG/Program number
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	MIDI channel/CAf/Value
Hold [SHIFT] and press 4	PG (Pitch Bend)	MIDI channel/PB/Value
Hold [SHIFT] and press 5	EX (Exclusive)	EX/F0—(hexadecimal)—F7
Hold [SHIFT] and press 6	TU (Tune Request)	TU

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After the last data (right-most) value in the MIDI message has been finalized, you will return to the Microscope display.
Continuous mode	After the last data (right-most) value in the MIDI message has been finalized, you will be able to enter the next MIDI message. Use this mode when you wish to create two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Move to the location where you wish to create the MIDI message.

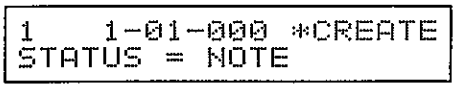
＊If MIDI messages exist at that location, the newly created MIDI message will be added to them.

② Move to the Create Event display.

[EDIT] → [3] → [ENTER] (Single mode)

[EDIT] → [3] → Hold [SHIFT] and press [ENTER] (Continuous mode)

Displayed to indicate Continuous mode



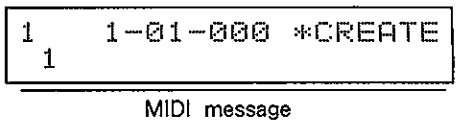
③ Select the MIDI status.

(Numeric keys / Alpha - dial) → [ENTER]

MIDI status

④ Create the MIDI message.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize values)
[◄][►] (move the cursor)



MIDI message

To enter a rest (CH.REST), move the cursor to the Note number, and hold [SHIFT] and press Numeric key [9].

*To change the MIDI status, press [MIDI] to return to the display of step ③.

< When Continuous mode is selected >

To continue inputting while changing values only as necessary, use [SKIP]. For example if you press [SKIP] after specifying only the Note number, the previously input Velocity and Gate time values will be used, and the MC - 50 will wait for you to enter data for the next message. To modify the previous input values, press [RESET] and re-enter the data.

< Creating Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.
Hold [SHIFT] and press Numeric keys [0]—[5] (enter A—F)
Hold [PAUSE] and press [►] (insert a value of 00)
Hold [PAUSE] and press [◄] (delete)
You can add data by entering a value at the position of F7.

*Exclusive message can be entered only from the Numeric keys.
*It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ μ EDIT 4 : Move a MIDI Message (Move Event)

☐ Explanation

This operation moves a specified MIDI message to another location in the same track.

＊To move or copy a MIDI message to another track, refer to the following operation " μ EDIT 5: Place Event".

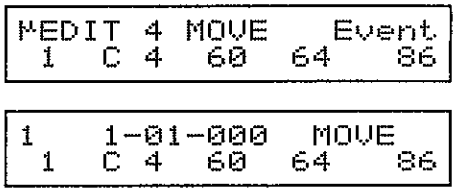
☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to move.

② Move to the Move Event display.

[EDIT] → [4] → [ENTER]

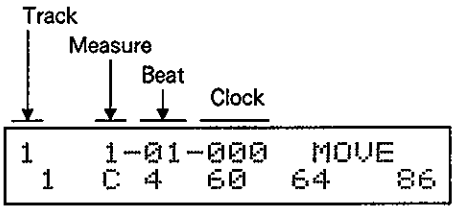


③ Specify the destination Measure / Beat / Clock, and execute the Move operation.

Alpha - dial / Numeric keys (modify values)

[ENTER] (finalize values)

[◀][▶] (move the cursor)



To change the Measure / Beat, move the cursor. When you finalize the Clock, the displayed MIDI message will be moved, and you will return to the Microscope display.

■ μ EDIT 5 : Memorize and Copy a MIDI Message (Event Memory / Place Event)

☐ Explanation

This operation temporarily stores a MIDI message in an Event Memory. MIDI messages stored in this way can be copied to another specified location. This is especially convenient when you wish to copy the same MIDI message to several locations. MIDI messages stored in Event Memories are preserved even when you move to another song, so you can use this operation to copy MIDI messages to other songs.

Event Memories are numbered 0—9, and each memory can store the following MIDI messages. Event Memory settings are renewed each time you store a new message into a memory.

Memory number	MIDI messages that can be stored
0	The MIDI message last erased by the Erase Event function is stored here. However, neither Exclusive messages nor Tempo data will be stored.
1—8	Each of these memories 1—8 can store any MIDI message (other than Exclusive messages or Tempo data).
9	This memory can store only an Exclusive message (within 600 bytes).

＊The contents of the Event Memories are preserved until you turn the power off.

When copying MIDI messages, you can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you copy a MIDI message, you will return to the Microscope display.
Continuous mode	After you copy a MIDI message, you will not return to the Microscope display. Use this mode when you wish to copy two or more MIDI messages.

☐ Storing an event into an Event Memory

● From the Microscope display

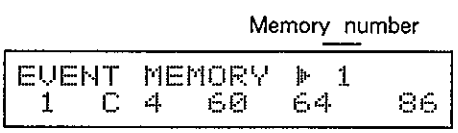
① Display the MIDI message you wish to store.

② Move to the Event Memory display.

[REC]

③ Select the Memory Number, and store.

Alpha - dial / Numeric keys → [ENTER]



When the MIDI event has been stored, you will return to the Microscope display.

☐ Copying a stored MIDI message (Place Event)

● From the Microscope display

① Move to the location (Track / Measure / Beat / Clock) where you wish to copy the MIDI message.

② Move to the Place Event display.

[EDIT] → [5] → [ENTER] (Single mode)

[EDIT] → [5] → Hold [SHIFT] and press [ENTER] (Continuous mode)

Displayed to indicate Continuous mode

Memory number

③ Select the Memory number of the MIDI message you wish to copy, and copy the message.

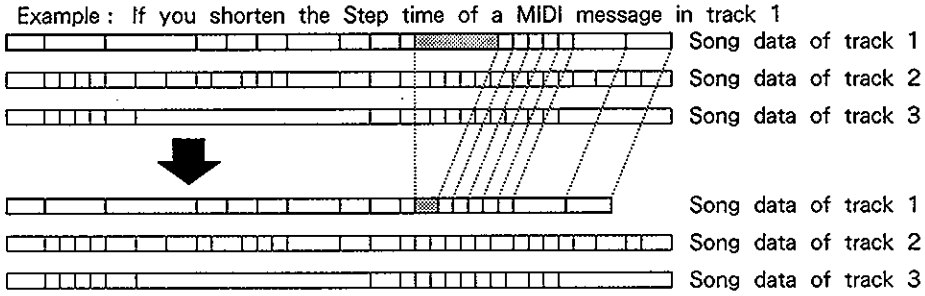
Alpha - dial / Numeric keys → [ENTER]

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ sEDIT 1 : Modify the Step Time (Change Step)

☐ Explanation

This operation modifies the Step time of a MIDI message (the time until the next MIDI message). When you modify the Step time, all MIDI messages (only in the specified track) will move forward or backward according to the change in the Step time. For example if you have created a Rest data at the beginning of a track, and modify its Step time, all MIDI messages in that track will be moved forward or backward.


Example : If you shorten the Step time of a MIDI message in track 1
Song data of track 1
Song data of track 2
Song data of track 3
Song data of track 1
Song data of track 2
Song data of track 3

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you finalize the Step time, you will return to the Microscope display.
Continuous mode	After you finalize the Step time, you will advance to the next MIDI message. Use this mode when you wish to modify the Step time of two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message whose Step time you wish to change.

＊It is not possible to change a Step time which is displayed as "FAR" or "END". In such cases, move the MIDI message to a location where the Step time will be 999 or less.

② Move to the Change Step display.

Hold [SHIFT] and press [EDIT] → [1] →
[ENTER] (Single mode)

Hold [SHIFT] and press [EDIT] → [1] →
Hold [SHIFT] and press [ENTER] (Continuous mode)

```
sEDIT 1 CHANGE Step
 1   C 4   60   64    86
```

Displayed to indicate continuous mode

```
1     1-01-000 *ST= 96
 1   C 4   60   64    86
```

< When Continuous mode is selected >

[SKIP] (finalize the modified value, and display the next MIDI message)

[RESET] (finalize the modified value, and display the previous MIDI message)

＊When using a Step Edit operation, all MIDI messages will be displayed, regardless of the View Field setting.

③ Modify the Step time, and finalize.

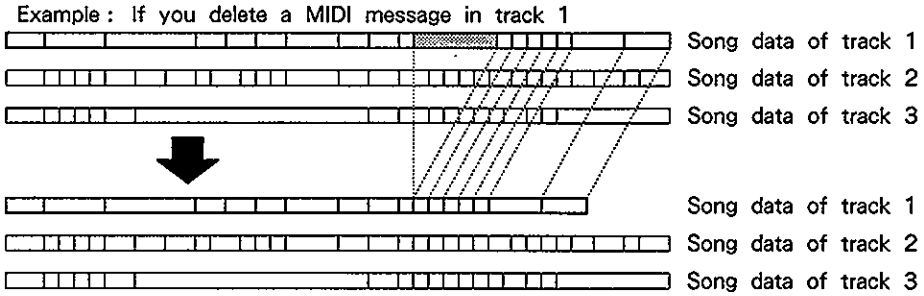
Alpha - dial / Numeric keys → [ENTER]

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ sEDIT 2 : Delete a MIDI Message (Delete Step)

☐ Explanation

This operation deletes a specified MIDI message. When you delete a MIDI message, all MIDI messages (only of the specified track) will move forward according to the Step time of the deleted message.


Example : If you delete a MIDI message in track 1
Song data of track 1
Song data of track 2
Song data of track 3
Song data of track 1
Song data of track 2
Song data of track 3

You can choose either Single mode or Continuous mode.

Operation mode	Function
Single mode	After you delete the MIDI message, you will return to the Microscope display.
Continuous mode	After you delete the MIDI message, you will advance to the next MIDI message. Use this mode when you wish to delete two or more MIDI messages.

☐ Procedure

● From the Microscope display

① Display the MIDI message you wish to delete.

② Move to the Delete Step display.

Hold [SHIFT] and press [EDIT] → [2] →
[ENTER] (Single mode)
Hold [SHIFT] and press [EDIT] → [2] →
Hold [SHIFT] and press [ENTER] (Continuous mode)

< When Continuous mode is selected >

[SKIP] (display the next MIDI message)
[RESET] (display the previous MIDI message)

```
sEDIT 2 DELETE Step
 1   C 4   60   64    86
```

Single mode display

```
Press REC to  DELETE
 1   C 4   60   64    86
```

Continuous mode display

```
1     1-01-000 *DELETE
 1   C 4   60   64    86
```

*When using a Step Edit operation, all MIDI messages will be displayed, regardless of the View Field setting.

③ Execute the Delete operation.

[REC]

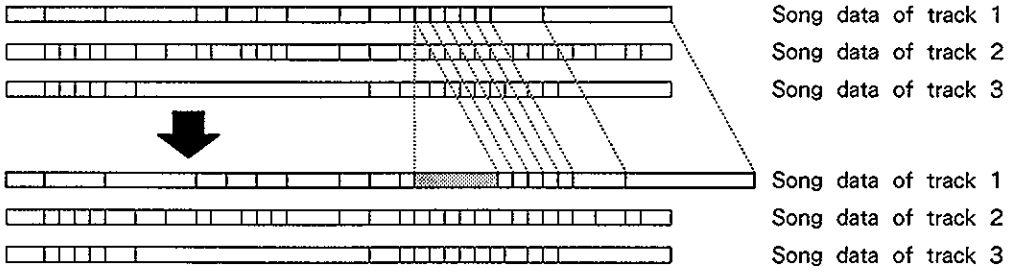
● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

■ sEDIT 3 : Insert a MIDI Message (Insert Step)

☐ Explanation

This operation inserts a MIDI message. When you insert a MIDI message, all MIDI messages (in the specified track) will move backwards according to the Step time of the inserted message. To enter a chord, you can create two or more Note messages at the same location (Measure / Beat / Clock).

Example : If you insert a MIDI message into track 1



You can choose either Single mode or Continuous mode.

Operation mode	Function
Single Mode	After you insert the MIDI message, you will return to the Microscope display.
Continuous Mode	After you insert the MIDI message, you will advance to the next MIDI message. Use this mode when you wish to insert two or more MIDI messages.

You can make settings for each type of MIDI message as follows.

Numeric key input	MIDI status	Setting items
9	NOTE	MIDI channel/Note name (Note number) / Velocity/Gate time
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	MIDI channel/PAf/Note number/Value
Hold [SHIFT] and press 1	CC (Control Change)	MIDI channel/CC/Control number/Value
Hold [SHIFT] and press 2	PG (Program Change)	MIDI channel/PG/Program number
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	MIDI channel/CAf/Value
Hold [SHIFT] and press 4	PG (Pitch Bend)	MIDI channel/PB/Value
Hold [SHIFT] and press 5	EX (Exclusive)	EX/F0—(hexadecimal)—F7
Hold [SHIFT] and press 6	TU (Tune Request)	TU

☐ Procedure

● From the Microscope display

① Move to the location where you wish to insert a MIDI message.

② Move to the Insert Step display.

Hold [SHIFT] and press [EDIT] → [3] →
[ENTER] (Single mode)

Hold [SHIFT] and press [EDIT] → [3] →
Hold [SHIFT] and press [ENTER] (Continuous mode)

```
sEDIT 3 INSERT Step
 1   C 4   60   64    86
```

Displayed to indicate Continuous mode

```
1    1-01-000 *ST=
STATUS = NOTE
```

③ Select the MIDI status.

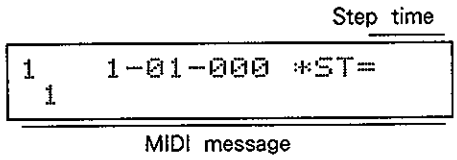
(Numeric keys / Alpha - dial) → [ENTER]

④ After you have created the MIDI message, specify the Step time, and finalize.

Alpha - dial / Numeric keys (set values)

[ENTER] (finalize values)

[◀][▶] (move the cursor)



To enter Rest data (CH.REST), move the cursor to the Note number, and hold [SHIFT] and press Numeric key [9].

*To change the MIDI status, press [MIDI] to return to the display of step ③.

< When Continuous mode is selected >

To continue inputting while changing values only as necessary, use [SKIP]. For example if you press [SKIP] after specifying only the Note number, the previously input Velocity, Gate time, and Step time values will be used, and the MC - 50 will wait for you to enter data for the next message.

To modify the previous input values, press [RESET] and re-enter the data.

< Creating Exclusive messages >

Exclusive messages contain data between F0 and F7. The data is displayed and input as hexadecimal numbers (00—7F). At F7 you can press [ENTER] to finalize the modified values.

Hold [SHIFT] and press Numeric keys [0]—[5] (enter A—F)

Hold [PAUSE] and press [▶] (insert a value of 00)

Hold [PAUSE] and press [◀] (delete)

You can add data by entering a value at the position of F7.

*Exclusive message can be entered only from the Numeric keys.

*It is not possible to modify or input Exclusive message which is longer than 600 bytes.

< Roland type IV check sum >

To input Roland type IV exclusive messages, you must input a check sum immediately in front of the F7. The MC - 50 will calculate this value automatically. Enter any check sum value in front of the F7, and press [ENTER]. (Check sums other than Roland type IV will not be calculated automatically.)

● If you have selected Continuous mode, press [MICROSCOPE] to return to the Microscope display.

UTILITY

Utility mode allows you to edit entire songs, calculate playing times, tune external MIDI sound modules, and perform other convenient functions.

UTIL 1: Delete a Song ····· (Song Delete)
UTIL 2: Check Playing Times ····· (Time Calculation)
UTIL 3: Copy Function Settings ····· (Function Copy)
UTIL 4: Copy Rhythm Patterns ····· (Rhythm pattern Copy)
UTIL 5: Exchange Song Numbers ····· (Song Exchange)
UTIL 6: Check Song Data ····· (Data Check)
UTIL 7: Erase Rest Data / Align Track Lengths ····· (Data Reduce)
UTIL 8: Tune MIDI Sound Modules ····· (Tune)

■ UTIL 1 : Delete a Song

☐ Explanation

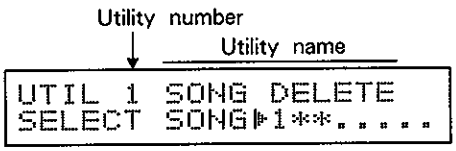
This operation deletes a song from internal memory. You can also delete two or more songs at once.

☐ Procedure

● From Mode 1 standby

① Select the Song Delete display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Song number you wish to delete.

Numeric keys (Each time you press the Numeric key corresponding to the song number you wish to delete, the number and "✻" symbol will alternate.) → [ENTER]

Song number to be deleted

✻To select all song numbers for deletion, press Numeric key [0].

Execute display

< Song number display >

From left to right, the display will show the specified condition of each song number. When you select the Song Delete display, the song number of the standby display will initially be specified.

Display	Meaning
number	will be deleted
✻	will not be deleted
.	song data does not exist

③ Execute the Song Delete operation in the Execute display.

[REC]

● Press [STOP] to end the operation.

■ UTIL 2 : Check Playing Times (Time Calculation)

☐ Explanation

This function allows you to check the playing time of the currently selected song. You can check not only the entire playing time, but also the playing time between specified points.

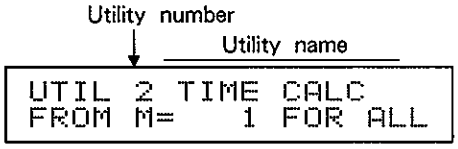
＊If you wish to specify an area using Locate points, you must first set the Locate points (☞P.18 or P.72).

☐ Procedure

● From Mode 1 standby

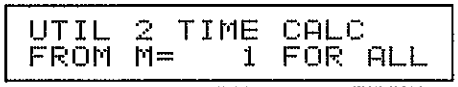
① Select the Song Delete display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [2] / Alpha - dial) → [ENTER]

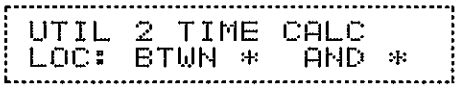


② Specify the Area for which to calculate playing time, and check the playing time.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

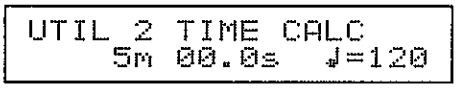


If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.



＊It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.
＊The calculation will be performed even if the Locate points are reversed.

Use [◀][▶] to move between the area-specifying display and the time - viewing display.
The time - viewing display shows the playback time for the displayed tempo. You can use the Alpha - dial / Numeric keys to modify the tempo.



＊Tempo changes in the Tempo track are included in the playing time calculation.

● Press [STOP] to end the procedure.

■ UTIL 3 : Copy Function Settings

☐ Explanation

This copies the function settings of another song. Use it when you want to use the same function settings as another song.

The following function settings will be copied. The settings of other functions will not be copied.

FUNC 1	Sync Clock
FUNC 2	Metronome
FUNC 4	Rhythm Velocity
FUNC 5	Rhythm Instrument
FUNC 9	Basic Tempo
FUNC 10	Locate Point
FUNC 11	Output Assign
FUNC 12	Transmit Channel
FUNC 13	Note Name
FUNC 14	Song Log

☐ Procedure

● From Mode 1 standby

① Select the Function Copy display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [3] / Alpha - dial) → [ENTER]

Utility number
Utility name

② Select the Song number to copy from.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀][▶] (move the display)

Currently selected song number

Song number of copy source

Execute display

③ Execute the Function Copy operation in the Execute display.

[REC]

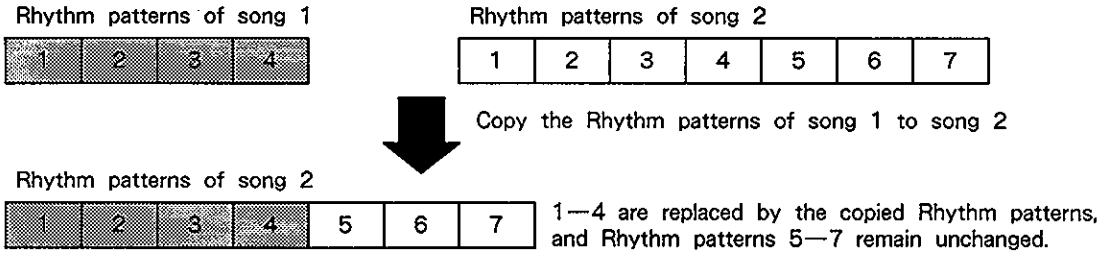
● Press [STOP] to end the procedure.

■ UTIL 4 : Copy Rhythm Patterns

☐ Explanation

This copies all Rhythm patterns from another song into the currently selected song. Use this operation when you wish to create a Rhythm track which uses the same Rhythm patterns as another song.

If Rhythm patterns already exist in the copy destination song, copying will be performed as follows.

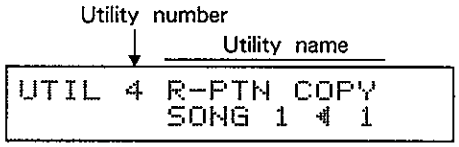

Rhythm patterns of song 1
1 2 3 4
Rhythm patterns of song 2
1 2 3 4 5 6 7
Copy the Rhythm patterns of song 1 to song 2
Rhythm patterns of song 2
1 2 3 4 5 6 7
1—4 are replaced by the copied Rhythm patterns, and Rhythm patterns 5—7 remain unchanged.

☐ Procedure

● From Mode 1 standby

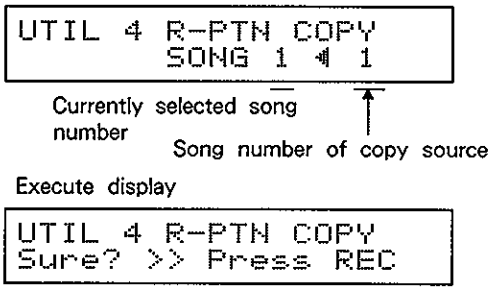
① Select the Rhythm Pattern Copy display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [4] / Alpha - dial) → [ENTER]



② Select the Song number to copy from.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀][▶] (move the display)



③ Execute the Rhythm Pattern Copy operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

■ UTIL 5 : Exchange Song Numbers

☐ Explanation

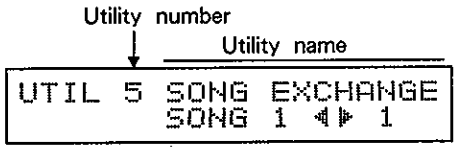
This exchanges the currently selected song with another song. Use it when you wish to change the order of the songs.

☐ Procedure

● From Mode 1 standby

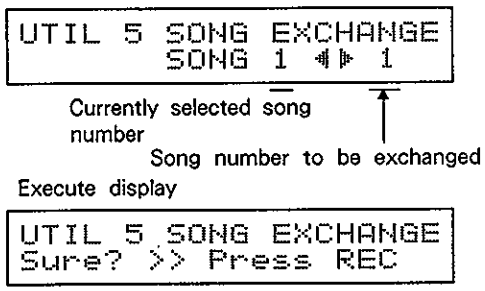
① Select the Song Exchange display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [5] / Alpha - dial) → [ENTER]



② Select the Song number to exchange with.

Alpha - dial / Numeric keys (specify values)
[ENTER] (finalize values)
[◀][▶] (move the display)



③ Execute the Song Exchange operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

UTIL 6 : Check Song Data (Data Check)

☐ Explanation

This allows you to check the type of MIDI messages that are recorded in each Phrase track. You can specify the area to be checked.

The length of Phrase tracks and the Rhythm track is also compared. If the Phrase tracks are longer than the Rhythm track, it is not possible to playback beyond the end of the Rhythm track. If you wish to playback to the end, you must lengthen the Rhythm track. To shorten Phrase tracks to match the Rhythm track, refer to the following item "UTIL 7: Data Reduce".

You can check the following items.

Numeric key input	Checked item	Content checked/display
0	WHOLE (every MIDI messages)	The MIDI channel numbers 1—16 on which the data is recorded
9	NOTE	
Hold [SHIFT] and press 0	PAf (Polyphonic Aftertouch)	
Hold [SHIFT] and press 1	CC (Control Change)	
Hold [SHIFT] and press 2	PG (Program Change)	
Hold [SHIFT] and press 3	CAf (Channel Aftertouch)	
Hold [SHIFT] and press 4	PB (Pitch Bend)	
Hold [SHIFT] and press 7	MODE (Mode message)	
Hold [SHIFT] and press 5	EX (Exclusive)	Included (these messages have been recorded) Not found (these messages have not been recorded)
Hold [SHIFT] and press 6	TU (Tune Request)	
Hold [SHIFT] and press 8	SPAN	Comparison of the length (Phrase tracks and Rhythm track) Normal (normal) Longer than TRK-R (the Phrase tracks are longer)

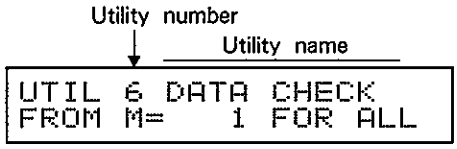
*If you wish to use Locate points to specify the area, you must first set the Locate points (☞ P.18 or P.72).

☐ Procedure

● From Mode 1 standby

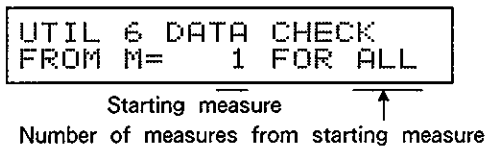
① Select the Data Check display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [6] / Alpha - dial) → [ENTER]

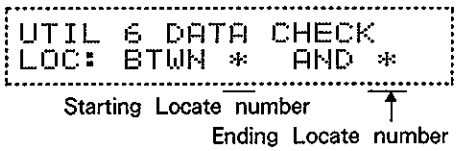


② Specify the Area in which you wish to check the data, and execute the Data Check operation.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

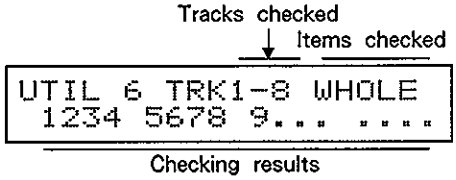


If you wish to use Locate points to specify the area, press [LOC] to switch the display. Each time you hold [SHIFT] and press [LOC], the display will alternate.



*It is not possible to use both Measures and Locate points to specify the area. The last - specified one will be used.

When you finalize the area, the checking results will appear in the lower line of the display



③ Select the Track and Items you wish to check, and view the results.

Alpha - dial / Numeric keys (modify values)
Track keys (select tracks)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

● Press [STOP] to end the procedure.

■ UTIL 7 : Erase Rest Data/Align Track Lengths (Data Reduce)

☐ Explanation

Data Reduce includes the following two functions.

◆ Data Reduce will erase Rest data that was input in Step Recording or Microscope mode, and converts them into blanks. This gets rid of excess data, and makes memory usage more efficient. To execute this, turn on "REDUCE CH.REST".

◆ If Phrase tracks are longer than the Rhythm track, the length beyond the end of the Rhythm track cannot be played. In such cases, you must either lengthen the Rhythm track, or shorten the Phrase tracks. Data Reduce will delete song data from the end of Phrase tracks that exceed the length of the Rhythm track, to make them the same length. To execute this, turn on "ADJUST LENGTH".

*If you have made many modifications while in Microscope mode, measure / beat / clock movement may become slower. To regain normal movement speed, execute Data Reduce (☞P.133). In this case, the desired result will be gained even if both the functions are turned off.

☐ Procedure

● From Mode 1 standby

① Select the Data Reduce display.

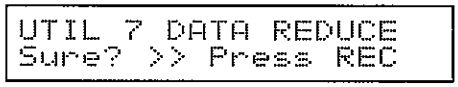
Hold [SHIFT] and press [UTIL] →
(Numeric key [7] / Alpha - dial) → [ENTER]

Utility number
Utility name

② Specify whether or not to execute the two functions.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize values)
[◀][▶] (move the cursor)

Execute display



③ Execute the Data Reduce operation in the Execute display.

[REC]

● Press [STOP] to end the procedure.

UTIL 8 : Tune MIDI Sound Modules

Explanation

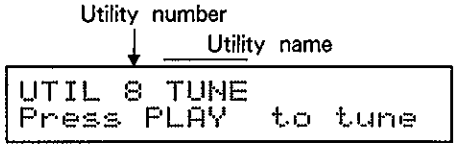
This function will transmit a Tune Request message and Note Messages (all MIDI channels, note name A4, velocity 64) from both MIDI OUT connectors. You can use this function to tune your MIDI sound modules, to check the connections of MIDI cables or audio cables, or when adjusting mixing levels.

Procedure

● From Mode 1 standby

① Select the Tune display.

Hold [SHIFT] and press [UTIL] →
(Numeric key [8] / Alpha - dial) → [ENTER]



② Transmit the Tune Request message and the Note messages.

[PLAY] (transmit a continuous note)
Hold [SHIFT] and press [PLAY] (transmit intermittent notes)

③ Stop transmission.

[PAUSE]

● Press [STOP] to end the procedure.

MODE 2 : DISK

In this mode you can save song data to disk, or load a song file from disk. A new disk or a disk which has been used by other devices must be formatted before you can use it to save song data (☞ P.148).

1: Load Song Files ..... (Load)
2: Save Song Data ..... (Save)
3: Delete a Song File ..... (Delete)
4: Rename a File ..... (Rename)
5: Compare Internal and Disk Data ..... (Verify)

■1 : Load Song Files

☐ Explanation

This operation loads one or more song files from disk into MC - 50 memory.

*If you wish to load only one song file, you can also use the Mode 1 function "Current Load" (☞P.53).

☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab ON < PROTECT >).

② Move to the Mode 2 Load display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]

```
MODE 2 DISK
1 LOAD    [SONG FILE]
```

Load function

```
LOAD SONG FROM DISK
SELECT SONG▶*****5...
```

③ Select the Song numbers you wish to load.

Numeric keys (Press the Numeric key for the song numbers you wish to load. Each time you press the key, the display will alternate between the number and a symbol.) → [ENTER]

```
LOAD SONG FROM DISK
SELECT SONG▶*****5...
```

Song numbers to be loaded

The lower line of the display will show the specified status of each song number, from left to right. The meaning of the display is as follows.

Display	Meaning
number	will be loaded
*	will not be loaded (the MC-50 contains song data)
.	will not be loaded (the MC-50 does not contain song data)

*To select all song numbers, hold [SHIFT] and press Numeric key [0]. To select all song numbers for which the MC - 50 does not contain data, press Numeric key [0].

④ For each song number, select a Song file from which to load, and execute loading.

Alpha - dial (select song files)
[ENTER] (finalize the song file, and move to the next song number)
[◀][▶] (finalize the song file / select the song number / move between displays)
[LOAD] (execute loading)

Song number to load into

```
LOAD ****5...◀ DISK
SONG 5◀Spring Song
```

Song file

Song number

Execute display

```
LOAD ****5...◀ DISK
Sure? >> Press LOAD
```

*If you press [LOAD] when not in the Execute display, the finalized song files and the currently selected song file will be loaded.

● When loading ends, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■2 : Save Song Data

☐ Explanation

This operation lets you assign a name to the song data in the MC - 50, and save it onto disk. It is not possible to save more than one song file of the same name on a single disk. (However, identically spelled names with differences in upper and lower case characters are considered different names, and are handled as separate song files.) If the disk already contains a song file with a name identical to the song data you are saving, the song file will be overwritten.

＊If you wish to save only one song file, you can also use the Mode 1 function "Current Save" (☞P.53).
＊It you wish to assign a song title in Mode 1, refer to "FUNC 3: Song Title" (☞P.64).

☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab OFF ＜WRITE＞).

② Move to the Mode 2 Save display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]

```
MODE 2 DISK
2 SAVE    [SONG FILE]
```

Save function

```
SAVE SONG ONTO DISK
SELECT SONG▶****4....
```

③ Select the Song numbers you wish to save.

Numeric keys (Press the Numeric key for the song numbers you wish to enter. Each time you press the key, the display will alternate between the number and a symbol.) → [ENTER]

```
SAVE SONG ONTO DISK
SELECT SONG▶****4....
```

Song numbers to be saved

The lower line of the display will show the specified status of each song number, from left to right. The meaning of the display is as follows.

Display	Meaning
number	will be saved
＊	will not be saved
.	the MC-50 does not contain song data

＊To select all song numbers for which the MC - 50 contains data, press Numeric key [0].

④ Specify the Song title.

Alpha - dial (select characters)
[◀][▶] (move the cursor)

```
SAVE ****4....▶ DISK
SONG 4▶Spring Song
```

Song title

You can use the following characters

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " ＊ + − ／ < = > ( ) [ ] { } ^ _ | $ % @

< Inputting characters from the Numeric keys >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will alternate through the characters, and they will be finalized immediately. To enter lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

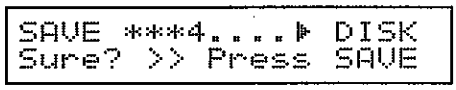
< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

*If you do not assign a Song Title (all spaces), you will not be able to save to disk.

⑤ Finalize the Song Title, and execute saving.

[ENTER]→[SAVE]



● When saving is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■3 : Delete a Song File

☐ Explanation

This function lets you delete a song file from disk.

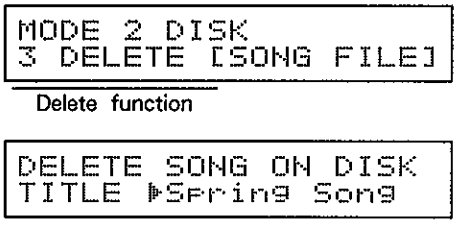
☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 2 Delete display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]

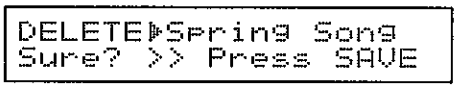


③ Select the Song file you wish to delete.

Alpha - dial → [ENTER]

④ Execute the Delete function.

[SAVE]



● When deletion is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4 : Rename a File

☐ Explanation

This function lets you rename a song file on disk.

☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 2 Rename display.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]

```
MODE 2 DISK
4 RENAME [SONG FILE]
```

Rename function

```
RENAME SONG ON DISK
TITLE ▶Spring Song
```

③ Select the Song file you wish to rename.

Alpha - dial → [ENTER]

```
RENAME SONG ON DISK
TITLE ▶Spring Song
```

Song file

④ Modify the Name.

Alpha - dial (select characters)
[◀][▶] (move the cursor)

```
TITLE  Spring Song
SONG 4▶Spring Song
```

Filename

You can use the following characters

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > ( ) [ ] { } ^ _ | $ % @

< Inputting characters from the Numeric keys >

You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will alternate through the characters, and they will be finalized immediately. To enter lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

* Rename is not possible if the disk already contains a song file with that name.

⑤ Finalize the name, and execute renaming.

[ENTER] → [SAVE]

```
RENAME▶Spring Song
Sure? >> Press SAVE
```

● When renaming is completed, you will return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■5 : Compare Internal and Disk Data (Verify)

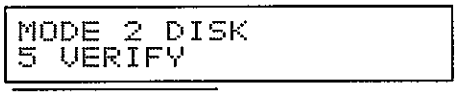
☐ **Explanation** This function checks whether the song data in internal memory is the same (except for the name) as the song data in a song file on disk

☐ **Procedure** ● From Mode 1 standby

① Insert the disk (with the protect tab ON < PROTECT >).

② Move to the Mode 2 Verify display.

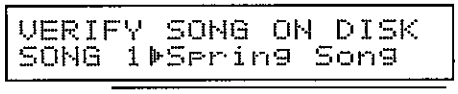
Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]



Verify function

③ Select the internal Song data you wish to compare.

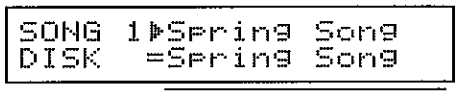
Alpha - dial / Numeric keys → [ENTER]



Internal song data

④ Select the disk Song file you wish to compare, and execute the Verify function.

Alpha - dial → [ENTER]



Song file

The lower line of the display will show the checking results.

Display	Checking results
SONG VERIFIED	The data is the same.
SONG DIFFERS	The data is different.

● Press [STOP] to end the procedure and return to the Mode 2 menu display.

To return to Mode 1: hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

MODE 3 : SONG LINK

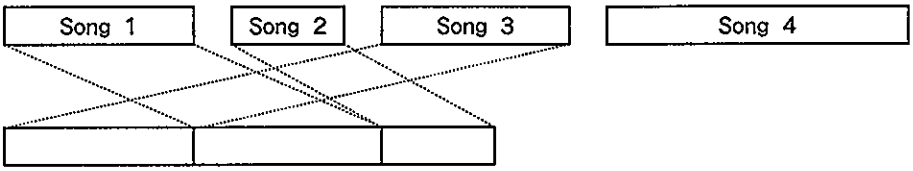
Using this function, two or more songs in internal memory can be linked together into a single song.

Linking Song Data

Explanation

When this function is used, two or more songs in internal memory will be linked together into a single song (song number 1). Song data you did not specify will be deleted. You can link the same song more than once, for up to 20 songs in a single operation.

Example : Linking song 3 → song 1 → song 2



The linked song data will be collected as song 1, and song 4 will be deleted.

The Rhythm patterns of each song you link will be arranged automatically. Rhythm patterns with the same data will be collected into one, and the Rhythm patterns will be rearranged.

You can link song data within the following limits.

Notes	Approximately 40,000 notes (this will differ depending on the amount of MIDI messages other than notes)
Rhythm pattern	240 or less
Length	9999 measures (or quarter notes × 87381) or less

* If the Rhythm Velocity (☞P.65) and Rhythm Instrument (☞P.66) settings of each song are different, they cannot be linked.
* If you move to a mode other than mode 3 before executing Link, the link settings will be lost.

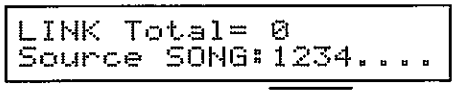
Procedure

● From Mode 1 standby

① Load the Song files you wish to link (☞P.136).

② Move to the Link display.

Hold [SHIFT] and press [MODE] →
(Numeric key [3] / Alpha - dial) → [ENTER]



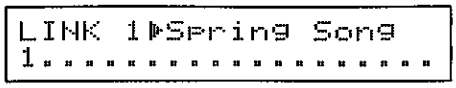
Song number which contain song data

③ Move to the Link Program display.

[REC]

④ Specify the order in which to link the songs.

Numeric keys (specify song numbers)
[ENTER] (move the cursor to the right)
[◀][▶] (move the cursor)



< Key functions >

Delete the song number at the cursor location	Hold [PAUSE] and press [◀] → [ENTER] (press [CANCEL] to abort)
Insert a song number at the cursor location	Hold [PAUSE] and press [▶] → numeric keys (song number) → [ENTER] (press [CANCEL] to abort)
Delete the song numbers after the cursor location	Hold [SHIFT] and press [SKIP] → [ENTER] (press [CANCEL] to abort)
Delete all song numbers	Hold [SHIFT] and press [RESET] → [ENTER] (press [CANCEL] to abort)

⑤ Check whether or not linking is possible.

[EDIT]

When you press [EDIT], the checking results will appear as follows.

Linking is possible.

```
LINK 1▶[EXECUTE OK?]
1234..................
```

Linking is not possible, because the song of the displayed number has different Rhythm Velocity (FUNC 4) or Rhythm Instrument (FUNC 5) settings.

```
Attn! Rhytm Mismatch
CAN'T LINK TO SONG x
```

Linking is not possible, because the amount of data is too large. Reduce the number of songs to be linked.

```
Attn! LACK of MEMORY
CAN'T LINK TO LINKxx
```

Linking is not possible, because the total number of Rhythm patterns would exceed 240. You can either not link the displayed song, or can delete unneeded Rhythm patterns.

```
Attn! LACK of R-PTN
CAN'T LINK TO SONG x
```

Linking is not possible, because the song length would exceed 9999 measures (or quarter notes × 87381). Reduce the number of songs to be linked.

```
Attn! LACK of LENGTH
CAN'T LINK TO LINKxx
```

⑥ Execute linking.

[ENTER]

Display when completed

```
LINK Complete!
Press STOP
```

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

MODE 4 : DISK UTILITY

This mode provides disk - related functions, such as initializing a disk or copying a disk.

1: Initialize a Disk ..... (Initialize)
2: Copy a Disk ..... (Backup)
3: Copy Song Files between Disks ..... (Transfer)
4: Convert a Song File ..... (Convert)
5: Name a Disk ..... (Disk Name)
6: Start up another System ..... (Restart)

1 : Initialize a Disk

☐ Explanation

This function initializes a new disk or a disk which has been used by another device, so that it can be used by the MC - 50.

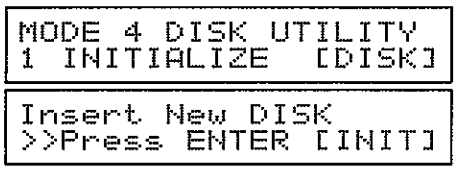
☐ Procedure

● From Mode 1 standby

① Insert the disk (with the protect tab OFF < WRITE >).

② Move to the Mode 4 Initialize display.

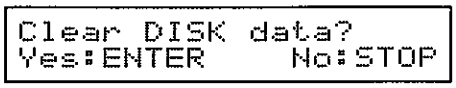
Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



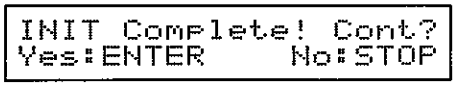
③ Execute the Initialize function.

[ENTER]

If the disk has already been used, the display shown at right will appear. If you are sure you want to initialize the disk, press [ENTER] once again. To quit without initializing, press [STOP].



When the disk has been initialized, the display shown at right will appear. If you wish to initialize another disk, exchange disks, and press [ENTER].



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■2 : Copy a Disk (Backup)

☐ Explanation

This function creates backup copies of a disk. When you copy a song disk, configuration, sequence files, and disk name will also be copied. As a precaution, use this function to make backup copies of important disk.

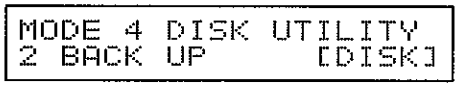
＊When you use this function, all internal song data will be erased. Be sure to save important song data to disk before using this function.

☐ Procedure

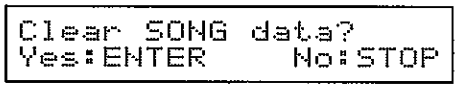
● From Mode 1 standby

① Move to the Mode 4 Backup display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]



If the internal memory of the MC - 50 contains data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.



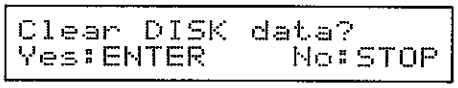
② Insert the copy source disk (with the protect tab ON < PROTECT >), and copy the disk data into internal memory.

[ENTER]

③ Insert the copy destination disk (with the protect tab OFF < WRITE >), and copy the internal data onto the disk.

[ENTER]

If the copy destination disk has already been used, the display shown at right will appear. If you are sure you want to copy, press [ENTER] once again. To quit without copying, press [STOP].



If the amount of data is large and cannot be copied in a single pass, you will be returned to step ①. Repeat steps ② and ③ until the display shows "BACK UP Complete!".

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■3 : Copy Song Files between Disks (Transfer)

☐ Explanation

This function copies all song files from a disk to another disk. The Disk Backup function explained in the previous page deletes all song files from the copy destination before copying, but this Transfer function adds song files without erasing the song files that were originally on the copy destination disk.

*When you use this function, all MC - 50 internal song data will be erased. Be sure to save important song data to disk before using this function.

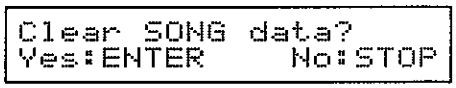
☐ Procedure

● From Mode 1 standby

① Move to the Mode 4 Transfer display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]

If the internal memory of the MC - 50 contains song data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.

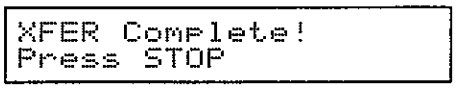


② Insert the copy source disk (with the protect tab ON < PROTECT >), and copy the song files from disk into internal memory.

[ENTER]

③ Insert the copy destination disk (with the protect tab OFF < WRITE >), and copy the internal song files onto the disk.

[ENTER]



If the amount of data is large and cannot be copied in a single pass, you will be returned to step ①. Repeat steps ② and ③ until the display shows "XFER Complete!".

If the copy source and the copy destination contain song files of the same name, the display shown at right will appear. If you wish to overwrite the file, press [ENTER]. If you don't wish to copy that specific song file, press [SKIP].

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■4 : Convert a Song File

☐ Explanation

This function converts song files from a disk created by the MRC - 500/300 into a form that can be used by the MC - 50. A song file converted in this way cannot be used by the MRC - 500/300. If you will want to use a song file with the MRC - 500/300 later, make a copy of that song file on another disk before converting it.

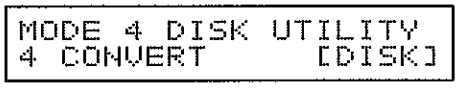
＊When you use this function, all MC - 50 internal song data will be erased. Be sure to save important song data to disk before using this function.

☐ Procedure

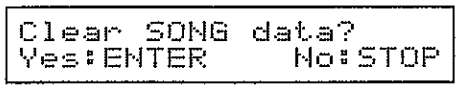
● From Mode 1 standby

① Move to the Mode 4 Convert display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]



If the internal memory of the MC - 50 contains song data, the warning display shown at right will appear. When you press [ENTER], all song data will be erased.



② Insert the disk to be converted (with the protect tab OFF < WRITE >), and specify Convert.

[ENTER]

③ Execute the Convert function.

[ENTER]

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■5 : Name a Disk (Disk Name)

☐ Explanation

This function allows you to assign a 13 - character name to a disk. Normally, you tell disks apart by attaching a label to the outside of the disk, and this Disk Name function lets you store the same type of label inside the disk as data. The Disk Name you assign here will be displayed when you use the function Available Disk (mode 1), and when you load or save configuration data (mode 5).

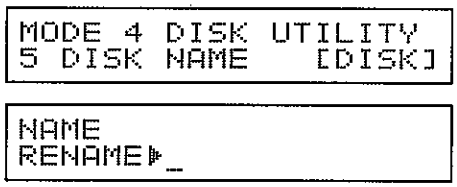
☐ Procedure

● From Mode 1 standby

① Insert the disk to be converted (with the protect tab OFF <WRITE>).

② Move to the Mode 4 Disk Name display.

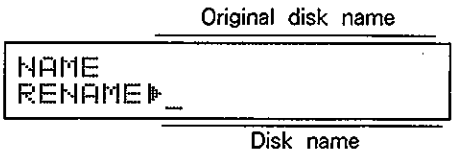
Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]



③ Specify the Disk name.

Alpha - dial / Numeric keys (select characters)
[◀][▶] (move the cursor)

*If a name has already been assigned to the disk, the original name will be shown in the upper line of the display.



You can use the following characters.

Space A…Z a…z 0…9 & ♩ ♪ ♭ # ! ? . , : ; ' " * + − / < = > () [] {} ^ _ | $ % @

< Using the Numeric keys to input characters >

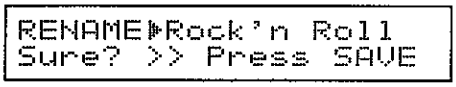
You can use the Numeric keys to input the numerals and characters printed on each key. Each time you press a key, you will rotate through the characters printed on that key. To input lower case characters, hold [SHIFT] and press a Numeric key ("!" will change to "?").

< Key functions >

Insert a space at the cursor position	Hold [PAUSE] and press [▶]
Delete the character at the cursor position	Hold [PAUSE] and press [◀]
Delete all characters after the cursor position	Hold [SHIFT] and press [SKIP]

④ Finalize the Disk name, and write it onto the disk.

[SAVE]



When the Disk name has been written onto the disk, you will return to the mode menu display.

● Return to Mode 1.

Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■6 : Start up another System (Restart)

☐ Explanation

This function lets you start up another system program from SUPER - MRC.

Numeric key input	Value	Operation
1	SUPER - MRC	Restart SUPER - MRC
2	SUPER - MRP	Start up SUPER - MRP
3	DISK	Start up a system program from a system disk. Select this when using the separately sold MRB - 500 (bulk librarian), etc.

*When you execute this Restart function, all song data in MC - 50 internal memory will be erased. Be sure to save important song data to disk before using this function.

☐ Procedure

● From Mode 1 standby.

① Move to the Mode 4 Restart display.

Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha - dial) → [ENTER] →
(Numeric key [6] / Alpha - dial) → [ENTER]

```
MODE 4 DISK UTILITY
6 RESTART
```

```
1>SUPER-MRC 3 DISK
2 SUPER-MRP
```

If song data exists in MC - 50 internal memory, the display shown at right will appear. Press [ENTER] and all song data will be erased.

```
Clear SONG data. OK?
Yes:ENTER    No:STOP
```

② Specify which system you wish to start up, and execute Restart.

(Numeric keys / Alpha - dial) → [ENTER]

*If you are restarting from a system disk, insert the system disk before you execute Restart.

MODE 5 : SYSTEM CONFIGURATION

The following information can be stored in each song disk as a Configuration File; six types of configuration setting, three MIDI function settings, View Field settings for the Microscope, and Auto Load filename (the name of the file which is automatically loaded when the system is started up). By inserting that disk when the system is started up, you can immediately begin working in the environment set up for you by the Configuration File.

1: Modify Configuration Data ····· (Change)
CNFG 1: Stopping and Locate Jumping ····· (Locate Mode)
CNFG 2: Step Recording Settings 1 ····· (Step/Gate)
CNFG 3: Step Recording Settings 2 ····· (Gate Time Ratio)
CNFG 4: Settings for Playing a Song from the middle ····· (MIDI Update)
CNFG 5: Modify Recording Settings ····· (Rewrite Mode)
CNFG 6: Tempo Recording and Modify Recording Settings ····· (MIDI Control)
2: Load a Configuration File ····· (Load)
3: Save Configuration Data ····· (Save)
4: Initialize the Configuration Data ····· (Initialize)

*Set the three MIDI function settings on page 56—58.
*Set the View Field for the Microscope on page 110.

■ CNFG 1 : Stopping and Locate Jumping

(Locate Mode)

☐ Explanation

These settings determine what happens when you press [STOP] during recording or playback, and also determine the actual movement caused by the Locate Jump function.

Item	Numeric key input	Value	Operation
STOP (Stop mode)	0	JUST	When you press [STOP] during recording or playback, you will stop right there.
	1	MEAS	When you press [STOP] during recording or playback, you will stop at the beginning of the next measure.
JUMP (Locate Jump mode)	0	JUST	When you use the Locate Jump function, you will move to the position of the Locate Point.
	1	MEAS	When you use the Locate Jump function, you will move to the beginning of the measure where the Locate Point is.

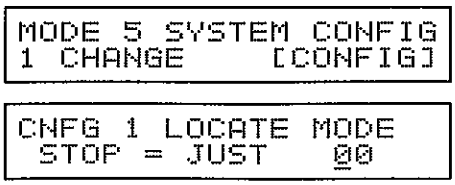
*When the MC - 50 is synchronized to a clock signal from an external device, these Stop Mode settings have no effect.

☐ Procedure

● From Mode 1 standby

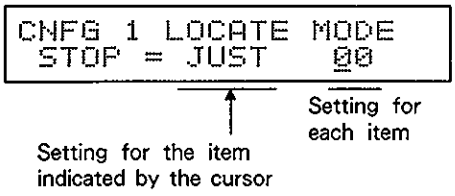
① Move to the Mode 5 Locate Mode display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Set the Stop mode and the Locate Jump mode.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■ CNFG 2 : Step Recording Settings 1 (Step/Gate)

☐ Explanation

These settings determine the number of clocks that correspond to each note symbol you use to specify the Step time and Gate time in Step Recording (☞P.39). In addition to specifying Step time and Gate time as note symbols, you can also specify these directly, so you should set these note symbols to basic values.

Note symbol	Step time	Gate time
𝅘𝅥𝅯	6	4
𝅘𝅥𝅰	12	9
𝅘𝅥𝅰₃	16	12
𝅘𝅥𝅯	24	19
𝅘𝅥𝅯₃	32	26
♪	48	41
♩₃	64	56
♩	96	86
𝅗𝅥	192	178

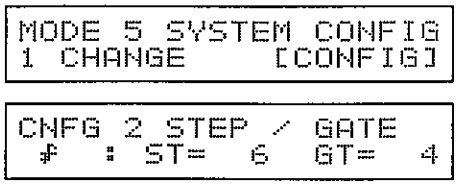
＊Step time and Gate time can be given a value of up to 999 clocks.

☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 Step/Gate display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]



② Set the Step time and Gate time for each note symbol.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■ CNFG 3 : Step Recording Settings 2

(Gate Time Ratio)

☐ Explanation

When you specify a Step time as a number in Step Recording (☞ P.39), this setting determines how long the Gate time will be, as a percentage of the specified Step time. Since you can modify the value later, you should set this to a basic value.

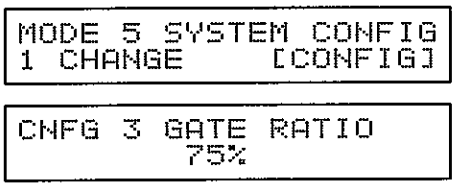
＊This can be set over a range of 1—200%. The initial value is 75%.

☐ Procedure

● From Mode 1 standby

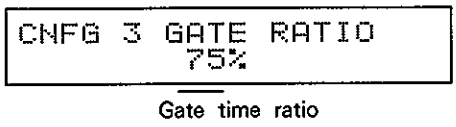
① Move to the Mode 5 Gate Time Ratio display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER]



② Set the Gate time ratio.

Alpha - dial / Numeric keys (modify values)



Gate time ratio

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■ CNFG 4 : Settings for Playing a Song from the middle (MIDI Update)

☐ Explanation

When you simply move to another measure, the changing values of the song data you passed over will not be transmitted to your MIDI sound module. For example even if the area you passed over contained a MIDI Program Change message, your MIDI sound module will not change sounds. This means that when you start playback from the new location, the correct sound will not be used.

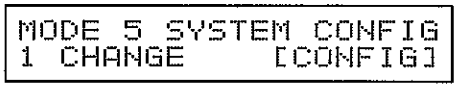
In the standby condition, you can hold [PAUSE] and press [MIDI] to make all changing messages in the song data (except for Note messages) up to the new location be transmitted from MIDI OUT. If you wish to automatically transmit these changes in song data which precede the point newly moved to in response to a Song Position Pointer message, set MIDI Update to "SPP".

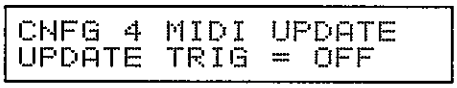
☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 MIDI Update display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]





② If you wish to automatically transmit the changing values of the song data, set this to "SPP".

Alpha - dial / Numeric keys (modify values)

SPP : transmitted/OFF : not transmitted

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■ CNFG 5 : Modify Recording Settings

(Rewrite Mode)

☐ Explanation

This setting specifies whether Gate time and Velocity will be modified simultaneously when you use the Rewrite Step operation (☞P.36) of Modify Recording.

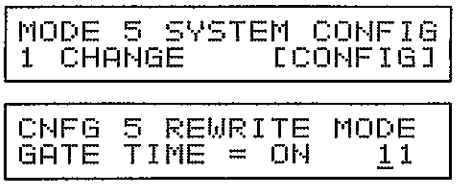
Item	Numeric key input	Value	Operation
GATE TIME	0	OFF	Gate time will not be modified
	1	ON	Gate time will also be modified
VELOCITY	0	OFF	Velocity will not be modified
	1	ON	Velocity will also be modified

☐ Procedure

● From Mode 1 standby

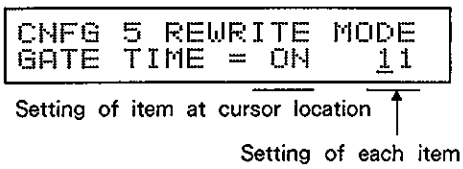
① Move to the Mode 5 Rewrite Mode display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [5] / Alpha - dial) → [ENTER]



② Specify whether Gate time and Velocity are to be modified together.

Alpha - dial / Numeric keys (modify values)



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■ CNFG 6 : Tempo Recording and Modify Recording Settings (MIDI Control)

☐ Explanation This selects the type of MIDI message that will be received from an external MIDI device to control the MC - 50 when you use Tempo Recording and Modify Recording (Rewrite Velocity).

You can select the follwing types of MIDI message.

MIDI message	Tempo recording	Modify recording (Rewrite Velocity)
NOTE # (Note number) 36 (C2)—84 (C6)	Higher note numbers will make the tempo faster. To select the Basic tempo, play note number 60 (C4). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—484. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher note numbers will increase the velocity. Range of variation : 4—124
VELO (Velocity) 1—127	Higher velocity will make the tempo faster. To select the Basic tempo, play a note with a velocity of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher velocities will increase the velocity. Range of variation : 1—127
CC (Control Change) the value (0—127) of any one specified control number	Higher values will make the tempo faster. To select the Basic tempo, transmit a value of 64. When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Higher values will increase the velocity. Range of variation : 1—127
PB (Pitch Bend) −128—+128	As the pitch is raised the tempo will become faster, and as the pitch is lowered the tempo will become slower. To select the Basic tempo, move the pitch bender to the center position (0). When the Basic tempo has been set in the range 10—250, the tempo can be controlled over a range of 5—496. When the Basic tempo is 120, the tempo can be controlled over a range of 8—233.	Raising the pitch will increase the velocity above 64. Lowering the pitch will decrease the velocity below 64. (Pitch Bend 0 = Velocity 64) Range of variation : 1—127

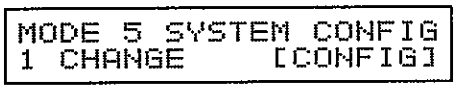
＊In Tempo Recording, the tempo will change in relation to the Basic tempo.

☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 MIDI Control display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER] →
(Numeric key [6] / Alpha - dial) → [ENTER]



② Select the MIDI message to be controlled by.

Alpha - dial / Numeric keys (modify values)
[◀][▶] (move the cursor)

MIDI message

If you have selected Control Change messages, you can also select the Control number.

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■2 : Load a Configuration File

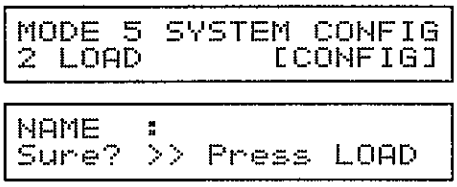
☐ Explanation This function loads the Configuration File from a song disk into internal memory, overwriting the previous Configuration data that was in internal memory.

☐ Procedure ● From Mode 1 standby

① Insert a Song disk (with the protect tab ON < PROTECT >).

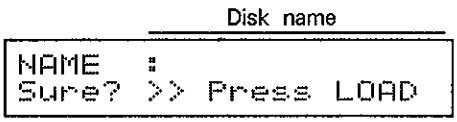
② Move to the Mode 5 Load display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER] →



③ Load the Configuration file into internal memory.

[LOAD]



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■3 : Save Configuration Data

☐ Explanation

This function saves the Configuration data from internal memory to a song disk.

You can specify whether or not to save each of the following items: Auto Load Filename, MIDI functions (☞P.56—58), and Microscope View Field (☞P.110). If you are saving Configuration data to a song disk for the first time, set all items ON. If the song disk already contains a Configuration file, set the items as needed.

Item	Numeric key input	Value	Operation
A-LOAD (Auto Load Filename)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	erase the disk settings
MIDI (MIDI 1/2/3)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	initialize the disk settings
μ-VIEW (Microscope View Field)	0	OFF (0)	don't save (don't update)
	1	ON (1)	save (update)
	2	ORG (2)	initialize the disk settings

If you set A - LOAD "ON", the names of all internal song data will be saved to disk as Auto Load Filenames. By saving the Auto Load Filenames to the disk which contains the song data from internal memory, you can automatically load those songs into the MC - 50 whenever the system is started up with that disk inserted.

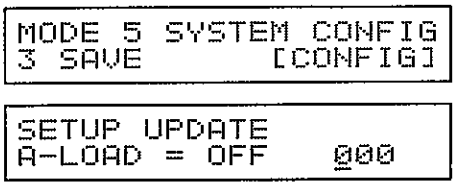
☐ Procedure

● From Mode 1 standby

① Insert a Song disk (with the protect tab OFF < WRITE >).

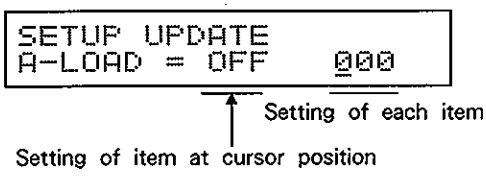
② Move to the Mode 5 Save display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [3] / Alpha - dial) → [ENTER] →



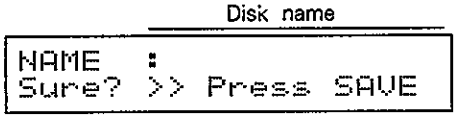
③ Specify whether or not to save each item.

Alpha - dial / Numeric keys (specify values)
[◀][▶] (move the cursor)



④ Save the Configuration file to the song disk.

[SAVE]



● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

■4 : Initialize the Configuration Data

☐ Explanation

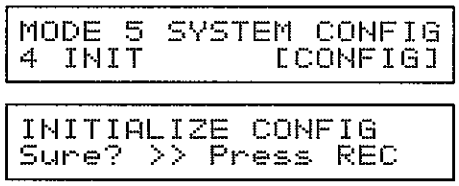
This function initializes the configuration data of internal memory.

☐ Procedure

● From Mode 1 standby

① Move to the Mode 5 Initialize display.

Hold [SHIFT] and press [MODE] →
(Numeric key [5] / Alpha - dial) → [ENTER] →
(Numeric key [4] / Alpha - dial) → [ENTER]



② Execute initialization.

[REC]

● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

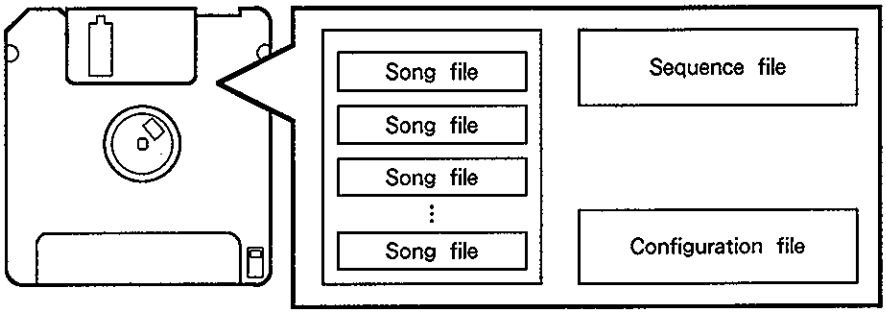
SUPER – MRP (PERFORMANCE SYSTEM)

The SUPER - MRP system (Performance System) lets you specify the order in which the song files of a song disk will be played. If you specify the song order of your stage performance, SUPER - MRP will play your entire set automatically, and you won't have to load a song file for each song. In addition to specifying the order of songs, you can also make two or more songs playback continuously, and replay a specified section of the songs as many times as desired.
If you have saved your SUPER - MRP settings to disk, you can reproduce the same automatic performance at any time.

■ Before you use SUPER - MRP

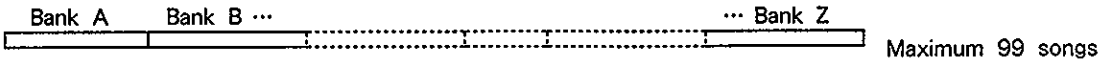
1. How SUPER - MRP is organized

SUPER - MRP determines the order in which the song files saved in a disk are played. The settings for SUPER - MRP are stored in a song disk as a "**Sequence file**". When SUPER - MRP runs, it uses the song file functions and part of the configuration file, but you make these settings from SUPER - MRC.

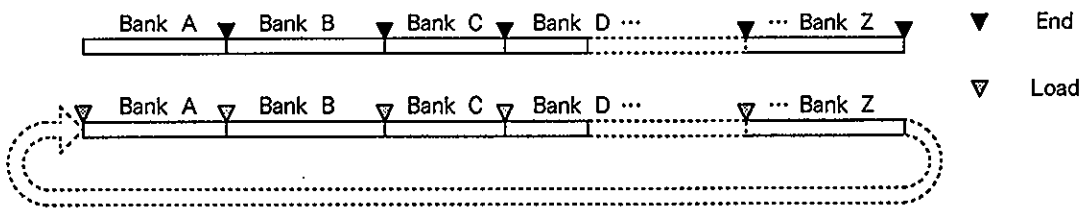


If, when SUPER - MRP is started up, you insert a song disk that contains a sequence file, the sequence file / song files (Bank A) / configuration file will be loaded into memory automatically. Then simply press PLAY and the songs will playback as specified by the SUPER - MRP settings. Of course even after SUPER - MRP is started up, you can exchange disks and play.

Song files that are to be loaded together as a unit are called "**Banks**". You can create 26 Banks, arranged in alphabetical order from A to Z. One Bank can specify the order of 32 song files, but if you make the same song file repeat two or more times, a single Bank can specify up to 99 songs. However, the total memory requirements of all song files can not exceed the capacity of internal memory. Also, the total of all song files used in all Banks must be 99 or less.



Normally you will playback only the song files of the Bank that was loaded, but by using the "**Ring play**" function, you can continuously playback the song files of all the Banks you specify.



The "**Sequence number**" determines the position of a song file in a Bank. This does not assign the song file itself, but assigns the Song Title that distinguishes the song file.

As you arrange song files in sequence, a Pause mark will be inserted between each Sequence number. The Pause mark automatically stops playback when the previous song ends. If you want to playback songs in succession, defeat the Pause marks.

You can also make the following settings for each song as necessary.

Function	Operation
Interval Time	When you defeat the Pause marks and playback in succession, this specifies the amount of time inserted before playing the next song.
Count In Mark	This inserts a two-measure count before playing the next song. If the metronome has been turned on, it will give you the beat.
Loop Mark	The specified area of the song will be repeated. Specify the repeated area from SUPER-MRC (☞P.69, "FUNC 7 : Block Repeat").

2. Three Modes

The operations of SUPER - MRP are broadly divided into three modes. Each mode is subdivided further.

◆ Mode 1: Play

Play the song files according to the sequence data settings.

Play	Play the song files of the specified bank.
Ring Play	Continuously play the song files of all banks.
Load	Load the sequence file and the SUPER-MRC configuration file into internal memory.

◆ Mode 2: Configuration

Make settings for sequence data.

CNFG 1 (Sequence)	Specify the order in which to play song files, and settings for Pause mark defeat, Interval times, Count In marks, and Loop marks.
CNFG 2 (Remote control)	Specify how an external MIDI device will control Start/Stop or song selection, etc.
Load	Load the sequence file and the SUPER-MRC configuration file into internal memory.
Save	Save sequence data settings to disk.

◆ Mode 3: Utility

Disk name	Assign a name to the disk. The procedure is the same as for SUPER-MRC "Mode 4 : Disk name" (☞P.152).
Restart	Start up a system program such as SUPER-MRC, etc. from SUPER-MRP.

3. Preparations before using SUPER - MRP

When SUPER - MRP plays songs, it will operate and playback according to the settings of the Configuration file and the Function settings in each Song file. It is not possible to change these settings while using SUPER - MRP. To change the settings, you must start up SUPER - MRC and make settings.

The following settings are used by SUPER - MRP.

FUNC 1 : Sync Clock	P.62
FUNC 2 : Metronome	P.63
FUNC 3 : Song Title	P.64
FUNC 4 : Rhythm Velocity	P.65
FUNC 5 : Rhythm Instrument	P.66
FUNC 7 : Block Repeat	P.69
FUNC 8 : Auto Stop	P.70
FUNC 9 : Baisc Tempo	P.71
FUNC 10 : Locate Point	P.72
FUNC 11 : Output Assgin	P.74
FUNC 12 : Transmit Channel	P.75

CFNG 1 : Locate Mode	P.156
CFNG 4 : MIDI Update	P.159
MIDI 1 : Receive Channel	P.56
MIDI 2 : Receive Status	P.57
MIDI 3 : Transmit Condition	P.58

*The repeat area of Block Repeat (FUNC 4) is used by SUPER - MRP as the Loop area for Loop playback.

4. Basic Procedure for SUPER - MRP

Use the following procedure to operate SUPER - MRP.

① Insert the song disk you wish to play using SUPER - MRP.

② Start up SUPER - MRP.

③ In Mode 2, set the playback order of the Song Files. As necessary, defeat Pause marks, and set Interval marks / Count In marks / Loop marks.

④ Move to Mode 1.
When you move to Mode 1, the song files for the Bank displayed in Mode 2 will automatically be loaded, and the MC - 50 will enter standby condition.

⑤ Press [PLAY] to begin playback.

⑥ Save the newly created sequence data to disk.

Starting the System

This section explains how to start SUPER - MRP, and how to start SUPER - MRC from SUPER - MRP. You can start SUPER - MRP either when you turn the power on, or from SUPER - MRC.

☐ Starting SUPER - MRP when the power is turned on

① Turn the power on while pressing Numeric key [2], and SUPER - MRP will be started.

② Insert a Song disk, and press [ENTER].

☐ Starting SUPER - MRP from SUPER - MRC (Restart)

To start SUPER - MRP from SUPER - MRC, use the Restart (Mode 4) procedure.

*When you restart, all internal data will be erased. Be sure to save important data to disk before you restart.

● From Mode 1 standby

① Insert a Song disk.

② Move to the Restart display of Mode 4.
Hold [SHIFT] and press [MODE] →
(Numeric key [4] / Alpha dial) → [ENTER] →
(Numeric key [6] / Alpha dial) → [ENTER]

```
MODE 4 DISK UTILITY
6 RESTART
```

```
1>SUPER-MRC 3 DISK
2 SUPER-MRP
```

If song data exists in internal memory, the display shown at right will appear. Press [ENTER] and all song data will be cleared.

```
Clear SONG data. OK?
Yes:ENTER     No:STOP
```

③ Select "SUPER - MRP" and execute.
(Numeric key [2] / Alpha - dial) → [ENTER]

< The startup condition of SUPER - MRP >

◆If there is a Sequence file on the song disk, you will enter the Play condition of Mode 1. Press [PLAY] and playback will begin as specified.

◆If there is no Sequence file on the song disk, the following display will appear.

```
Attn! NO SEQUENCE
Press STOP
```

Press [STOP] to get the mode select display (Mode 2 display). To create sequence data, press [ENTER] (☞P.175).

☐Starting SUPER - MRC from SUPER - MRP (Restart)

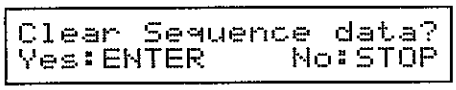
To start SUPER - MRC from SUPER - MRP, use the Restart procedure of Mode 3.

*When you restart, all internal sequence data will be erased. Be sure to save important data to disk before you restart.

① Move to the Restart display of Mode 3.

Hold [SHIFT] and press [MODE] →
(Numeric key [3] / Alpha dial) → [ENTER] →
(Numeric key [2] / Alpha dial) → [ENTER]

If sequence data exists in internal memory, the display shown at right will appear. Press [ENTER] and all sequence data will be cleared.



② Select "SUPER - MRC" and execute.

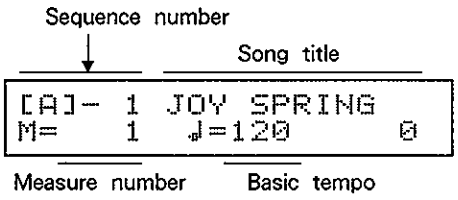
(Numeric key [1] / Alpha - dial) → [ENTER]

■ Mode 1 : Playback Methods

In Mode 1 you can make sequence file settings, and can playback according to the settings of Mode 2.

☐ Moving to Mode 1 from another mode

Hold [SHIFT] and press [MODE] (move to the Mode select display) → (Alpha - dial / Numeric key [1]) → [ENTER]



*When you move from Mode 2 to Mode 1, the song files of the Bank that was displayed in Mode 2 will automatically be loaded into internal memory.

☐ Song playback

◆When you press [PLAY], the songs will be played back as specified.
When the last song of the Bank, playback will stop. If there is a Pause mark at the beginning of the next Bank, the song files of the next Bank will be loaded.

*If the Pause mark has been turned off, playback will continue immediately after the previous song. If the Interval time is other than 0, the lower right of the display will show a countdown for the Interval time.

◆To use Ring play, hold [SHIFT] and press [PLAY]. During Ring play, Pause marks and Loop marks are ignored, and the Count In mark and Interval time settings will be used.

*Song files are reloaded when a Bank is selected, and this will require some time.

◆If a Loop mark has been set, connect a pedal switch (DP - 2) to the PUNCH IN/OUT jack. The loop area will be repeated endlessly until you press the pedal. If you press the pedal when not in the loop, you will move to the beginning of the loop and begin loop playback.

◆If the Sync Clock (FUNC 1) of the song has been set to "MIDI" or "TAPE", use an external device to control playback. In this case, Ring play cannot be used.

◆If Remote control is turned on, you can control Start/Stop and select songs etc. from an external MIDI device.

*During playback, Song Select and Song Position Pointer messages are not received.

☐ Adjusting the Basic tempo

The Basic tempo can be temporarily adjusted during standby or during playback. However when another song is selected, the Basic tempo of that song will be used.

[◀][▶] (move the cursor to tempo) → Alpha - dial (or Numeric keys → [ENTER])

☐Selecting the sequence number

[◀][▶] (move the cursor to sequence number) → Alpha - dial, or Numeric keys (select Banks: hold [SHIFT] and press a Numeric keys) → [ENTER] (finalize)

< Key functions >

Select the next sequence number (in the same bank)	Hold [SHIFT] and press [SKIP]
Select the previous sequence number (in the same bank)	Hold [SHIFT] and press [RESET]
Select the next Bank	Hold [SHIFT] and press [▶]
Select the previous Bank	Hold [SHIFT] and press [◀]

*When you select a Bank, the song files of the selected Bank will be automatically loaded into the MC - 50.

☐Moving to another measure

[◀][▶] (move the cursor to measure number) → (Alpha - dial, or Numeric keys → [ENTER])

< Key functions >

Move to the last measure	[SKIP]
Move to the first measure	[RESET]
Move to the next measure	Hold [PAUSE] and press [SKIP]
Move to the previous measure	Hold [PAUSE] and press [RESET]

☐Other functions

Locate Jump	[LOC] → Numeric keys/Alpha - dial → [ENTER]
Metronome on/off	[FUNC]
Playback tracks on/off	Track keys
Track monitor	[TRACK MONITOR]
MIDI monitor	Press [TRACK MONITOR], then press [MIDI]

*The metronome can be turned on/off regardless of the function setting of each song (FUNC 2). However the metronome on/off setting is temporary, and when another song is selected, the function setting of that song will be used.

☐Exchanging a different song disk (containing a sequence file)

① Exchange the song disks.

② Hold [SHIFT] and press [LOAD], and the sequence file / song files (Bank A) / configuration file will be loaded into the MC - 50.

■ Mode 2 : Playback Settings

1. Creating Sequence Data

Song files that are to be loaded together as a unit are called "**Banks**". You can create 26 Banks, arranged in alphabetical order from A to Z. One Bank can specify the order of 32 song files, but if you make the same song file repeat two or more times, a single Bank can specify up to 99 songs. However, the total memory requirements of all song files can not exceed the capacity of internal memory. Also, the total of all song files used in all Banks must be 99 or less.

Song files must be arranged in order from sequence number A - 1. Skipping (for example) from A to E, or 1 to 4 is not possible.

< Pause marks >

A Pause mark causes playback to automatically stop when a song file finishes playback. When you assign a song file to a sequence number, a Pause mark will automatically be added. If you wish to playback the song in succession with the previous song, turn off the Pause mark.

When a Pause mark is added to the first sequence number in a Bank, it acts differently. When the previous Bank finishes playback, the song files of the Bank which was given the Pause mark will be loaded into the MC - 50.

If a Pause mark were added to A - 3

▮▮ Pause mark

A-1	A-2	A-3	A-4	A-5	B-1	B-2

A-1 → A-2 → Stop → PLAY → A-3 → A-4 → A-5 → Stop

If a Pause mark were added to B - 1

▮▮ Pause mark

A-1	A-2	A-3	A-4	A-5	B-1	B-2

A-1 → A-2 → A-3 → A-4 → A-5 → Load → Stop → PLAY → B-1 → B-2

＊If Ring play is selected, playback will be continuous, and all Pause marks will be ignored.

< Interval time/Count In mark/Loop mark >

The following will explain the Interval time / Count In mark / Loop mark which can be set for each song.

◆ Interval time: 0—240 seconds

When the Pause mark has been turned off for continuous playback, this specifies the length of time waited before playing back the song. If the Pause mark has not been turned off, this setting has no effect.

▮▮ Pause mark

0 5 3 Interval time

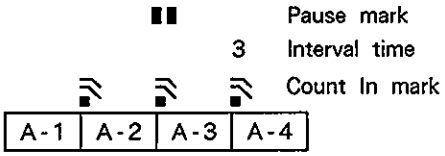
A-1	A-2	A-3	A-4

A-1 → A-2 → Interval time : 5 → A-3 → Stop → PLAY → A-4

＊If Ring play is selected, playback will ignore Pause marks, so the Interval time setting will apply.

◆ Count In mark

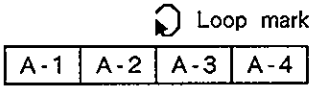
If you add a Count In mark, If you add a Count In mark, the song will be played back after a two-measure metronome count. When playing back in succession with the previous song, the count will begin after the Interval time.



A-1 → Count In → A-2 → Stop → PLAY → Count In → A-3
→ Interval time : 3 → Count In → A-4

◆ Loop mark

If a song has been given a Loop mark, its specified area will playback repeatedly. Control Loop play using a pedal switch connected to the PUNCH IN/OUT jack. Set the loop area in SUPER - MRC (☞ P.69, "FUNC 7: Block Repeat").

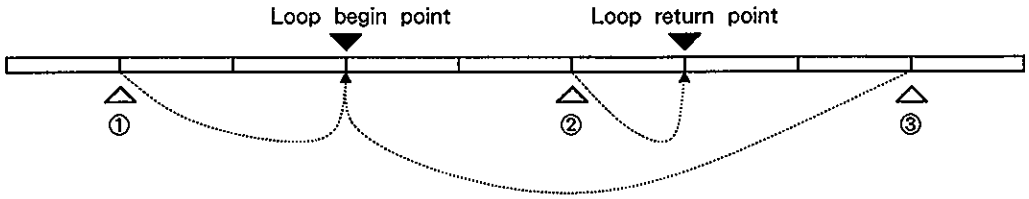


The specified area of song file A-3 will be looped.

*When Ring play is used, Loop marks will be ignored.

< Loop play operation >

When playback of the looping area begins, it will continue looping until you press the pedal. When you press the pedal within the looping area (at location ②), looping will end, and playback will continue from the loop return point.(If the end of the loop is at the end of the song, playback will stop when you press the pedal.) If you press the pedal while outside of the loop area (at locations ①, ③), you will move to the beginning of the loop and begin looping.



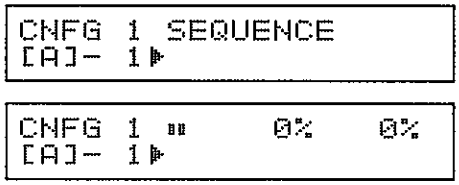
The result of pressing the pedal will depend on the setting of the Stop mode (☞P.156, "CNFG 1: Locate Mode").

Stop mode	Operation
JUST	Move immediately from the place where you pressed the pedal.
MEAS	Move after playing to the end of the measure where you pressed the pedal.

☐ Creating sequence data

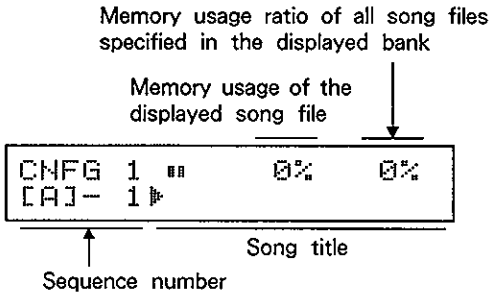
① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select Song files in the order of playback, and make settings as necessary.

Alpha - dial / Numeric keys (modify values)
[ENTER] (finalize values)
[◀][▶] (move the cursor)


Memory usage ratio of all song files specified in the displayed bank
Memory usage of the displayed song file
CNFG 1 0% 0%
[A]- 1
Song title
Sequence number

*If selecting a song file results in more than 100% of the Bank memory being used, assign that song file to the next Bank. (If 100% is exceeded, playback will not be possible.)

To select a new Bank, move the cursor to the sequence number, and with the last sequence number displayed, hold [SHIFT] and press [ENTER].

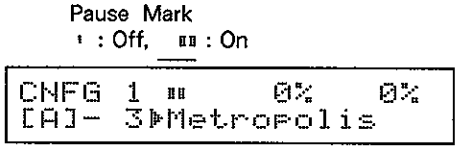
*By holding [SHIFT] and pressing [ENTER] while a sequence number in the middle of the Bank is displayed, you can split/join Banks. For details, refer to the following item.

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

Turning off the Pause mark

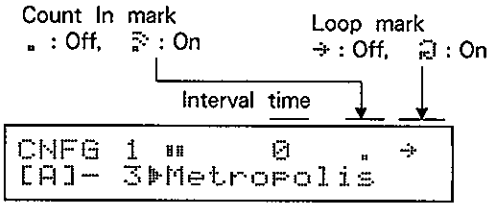
Each time you press [PAUSE], the Pause mark will be turned on/off.
The on/off condition is indicated by the symbol in the upper line of the display. When the Pause mark is turned off, the song will playback in succession with the previous song file.



Inputting Interval time / Count In mark / Loop mark

Press [▶] to select the setting display, and set each item.

Alpha - dial (modify values)
[◀][▶] (move the cursor)
[ENTER] (finalize all values, and select the next sequence number)



● End the procedure and return to Mode 1.
Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

＊When you select Mode 1, the song files of the Bank displayed in Mode 2 will be loaded into the MC - 50.
＊After playing back in Mode 1 and checking that playback is correct, save the sequence data to the song disk (☞P.182).

2. Splitting and joining Banks

The song files assigned to each Bank can be split or joined at any sequence number. This is useful when you are organizing song files into Banks.

◆ Splitting a Bank

You can split the song files of a Bank at any location. When you split a Bank, subsequent Banks will be moved backward one Bank.

Example : Splitting at A - 4

A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	C-1	C-2

A-1	A-2	A-3	B-1	B-2	C-1	C-2	C-3	D-1	D-2

＊It is not possible to split a Bank at the beginning. Nor is it possible to split a Bank if Banks already exist all the way to Z.

◆ Joining Banks

You can join the song files of two Banks into one Bank. When you join Banks, subsequent Banks will be moved forward one Bank.

Example : Joining at B - 1

A-1	A-2	A-3	B-1	B-2	C-1	C-2	C-3	D-1	D-2

A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	C-1	C-2

＊Joining is not possible unless the first of the Banks is selected. Nor is it possible to join at A - 1.

□ Procedure for splitting/joining Banks

① Move to the Sequence display of Mode 2.
Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]

② Select the sequence number at which you wish to split (or join) the Bank.
Alpha - dial, or Numeric key (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

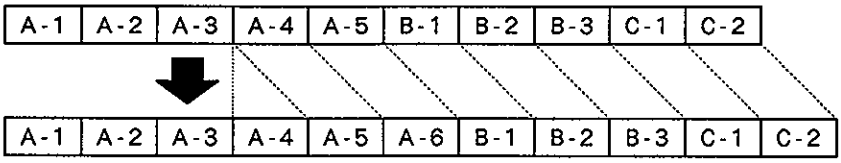
③ Execute join (split).
Move the cursor to the sequence number, and hold [SHIFT] and press [ENTER] (alternates each time you press the key).

● End the procedure and return to Mode 1.
Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

3. Edit the order of Songs (Insert/Delete)

You can insert song files, or delete unwanted song files. It is also possible to successively insert/delete two or more song files.

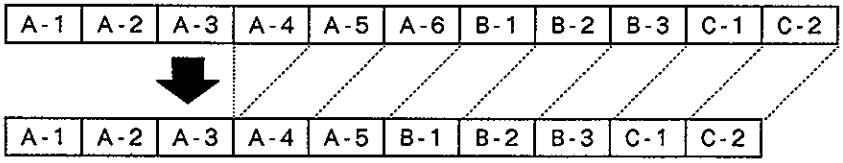
Example : Insert a song file at A-4



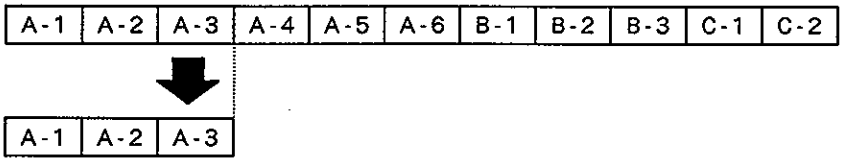
*When you insert a song file, make sure that the total data size of all song files assigned to the Bank does not exceed 100%.

You have two ways to delete; delete only the specified song file, or delete all song files following the specified song file.

Example : Delete song file A-4



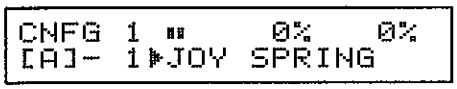
Example : Delete song files A-4 and following



☐ Insert a song file

① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Sequence number at which you wish to insert a song file.

Alpha - dial, or Numeric keys (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

③ Move to Insert mode.

[EDIT] → [1] → [ENTER]

If you are inserting a file at the end of the Bank, or after the displayed sequence number, use the following procedure.

[EDIT] → [1] → Hold [SHIFT] and press [ENTER]

④ Select the Song file you wish to insert, and execute the operation.

Alpha - dial → [ENTER]

When you press [ENTER], you will move to the next sequence number. If you wish to continue inserting other song files, repeat the above procedure.

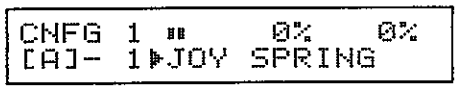
● End the procedure and return to Mode 1.

[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

☐ Delete a song file

① Move to the Sequence display of Mode 2.

Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [1] / Alpha - dial) → [ENTER]



② Select the Sequence number from which you wish to delete the song file.
Alpha - dial, or Numeric keys (hold [SHIFT] for Banks) → [ENTER]

< Key functions >

Move to the next sequence number	[SKIP]
Move to the previous sequence number	[RESET]
Select a bank	Hold [SHIFT] and press [◀][▶]
	Hold [SHIFT] and press a Numeric key → [ENTER]

③ Move to Delete mode.
[EDIT] → [2] → [ENTER]

④ Execute the Delete operation.
[REC] (delete the displayed song file)
Hold [RESET] and press [REC] (delete the displayed song file and all following song files)

If you delete by pressing [REC], the song file of the next sequence number will be displayed. If you wish to continue deleting, repeat the above procedure.

● End the procedure and return to Mode 1.
[STOP] → Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

4. Remote Control on/off

The Remote Control function allows you to perform panel operations such as Start/Stop from external MIDI devices. MIDI keyboard controllers such as the A - 50 or A - 80 have Start/Stop control functions. If you wish to use such MIDI devices to control the MC - 50, turn Remote Control on.

The following functions can be remotely controlled.

MIDI message		Operation
Realtime messages	Start	Playback from the beginning of the song
	Continue	Playback from the current position in the song
	Stop	Stop playback
Common messages	Song Position Pointer	Specify the current position
	Song Select	Select a sequence number

*Remote Control does not control the tempo, as does synchronization. The method of synchronization will depend on the Sync Clock setting (FUNC 1) of each song.

☐ Remote control settings

① Move to the Remote Control display of Mode 2.
Hold [SHIFT] and press [MODE] →
(Numeric key [2] / Alpha - dial) → [ENTER] →
(Numeric key [2] / Alpha - dial) → [ENTER]

② Turn Remote control on/off.
(Alpha - dial / Numeric keys) → [ENTER]

● End the procedure and return to Mode 1.
Hold [SHIFT] and press [MODE] → (Numeric key [1] / Alpha - dial) → [ENTER]

5. Saving and Loading Sequence Data (File)

Sequence data will be lost when you turn the power off. To keep your settings, you must save them to a song disk. Sequence files can be loaded from a song disk into the MC - 50.

＊When you load a sequence file into the MC - 50, the configuration file will also be loaded at the same time.

☐ Saving sequence data

You can save sequence data to a sequence file in the Mode 2 menu display or sequence display.

① Remove the disk, set the protect slider off (WRITE), and re - insert it.

② Execute the Save operation.
Hold [SHIFT] and press [SAVE]

☐ Loading sequence file

You can load a sequence file in the menu display / sequence display of Mode 1 or Mode 2.

① Execute the Load operation.
Hold [SHIFT] and press [LOAD]

APPENDIX

■ Error Messages

*Unfortunately, it may be impossible to restore the contents of data stored on disk once it has been corrupted. Roland assumes no liability concerning such loss of data.

□ SUPER - MRC

● MODE 1

```
Attn! LACK of LENGTH
Press STOP
```

Reason: Since the length of the song data would exceed the limit, the operation cannot be executed.
Action: Press [STOP]. Make sure you do not exceed the maximum length of song data.

```
Attn! LACK of MEMORY
Press STOP
```

Reason: Due to the large amount of data in the song file, it cannot be loaded into internal memory.
Action: Press [STOP]. Delete unneeded song data from internal memory.

```
Error 4 MEMORY FULL
Press STOP
```

Reason: Internal memory is full, and further recording is not possible.
Action: Press [STOP]. Delete unneeded song data.

```
Attn! BUFFER FULL
Press STOP
```

Reason: A large amount of MIDI messages were received in too short a time to process them.
Action: Press [STOP]. If the Soft Thru setting is on, MIDI message handling will be a bit slower. Either turn Soft Thru off, or widen the interval between the incoming MIDI messages, or reduce the amount of incoming MIDI messages.

```
Attn! MIDI ERROR
Press STOP
```

Reason: The data received from MIDI IN was not a MIDI message, so recording has been stopped.
Action: Press [STOP].

```
Attn! MIDI OFF LINE
Press STOP
```

Reason: The MIDI cable connected to MIDI IN has been disconnected (or broken), so recording has been stopped.
Action: Press [STOP]. Check MIDI cable connections.

● MODE 2

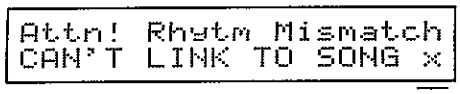
```
Attn! LACK of MEMORY
Press STOP
```

Reason: Due to the large amount of data in the song file, it cannot be loaded into internal memory.
Action: Press [STOP]. If you are loading two or more song files, reduce the number of song files. If internal memory contains unneeded song data, delete that song data.

```
Attn! 2 Versions
SONG x>song title
```

Reason: Song data of the same name already exists.
Action: Modify the Song Title, and press [ENTER].

● MODE 3



Reason: FUNC 4 and 5 settings are different.
Action: Set the function settings of the displayed song number to be the same as the other songs.

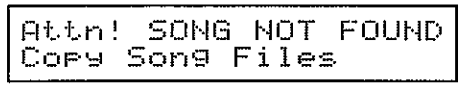
Reason: Linking to or beyond the displayed Link number would exceed the capacity of internal memory.
Action: Reduce the number of songs to be linked.

Reason: Linking to or beyond the displayed Link number would exceed 240 Rhythm patterns.
Action: Reduce the types of song data to be linked.

Reason: Linking to or beyond the displayed Link number would exceed the limits of song length.
Action: Reduce the number of songs to be linked.

□ SUPER - MRP

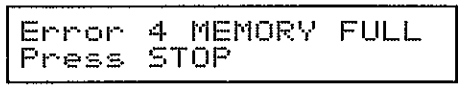
● MODE 1



Reason: A song file specified in a sequence file is not on disk.
Action: Press [STOP]. Modify the settings of the sequence file.

Reason: Since there is no sequence data, it is not possible to enter mode 1.
Action: Press [STOP]. Either make sequence data settings, or load a sequence file from disk into internal memory.

Reason: Due to the large total amount of data in all song files assigned to the Bank, it cannot be loaded into internal memory.
Action: Press [STOP]. Make settings so that the songs in the Bank use less than 100% of memory.



Reason: A song file has been modified to increase the amount of data after setting a song file, and cannot be processed.
Action: Press [STOP]. Make settings and try again.

● MODE 2

OVER 32 SONGS/BANK Press STOP	**Reason**: A single bank contains more than 32 song files. **Action**: Press [STOP].
OVER 99 SEQUENCE Press STOP	**Reason**: There are more than 99 song files total for all Banks. **Action**: Press [STOP].

☐ Common to both SUPER-MRC/SUPER-MRP

Attn! DISK CHANGED Change DISK & ENTER	**Reason**: Since you exchanged the disk during the procedure, processing cannot be continued. **Action**: Insert the previous disk, and press [ENTER].
Attn! NO DISK Insert DISK & ENTER	**Reason**: No disk is inserted. **Action**: Insert a disk, and press [ENTER].
Attn! NO DISK SPACE Press STOP	**Reason**: Since the amount of song data is greater than the available space on disk, it cannot be saved to disk. **Action**: Press [STOP]. Either delete unneeded song files, or insert another song disk
Attn! PROTECTED Press STOP	**Reason**: The protect tab of the disk is On (PROTECT position). **Action**: Press [STOP]. Set the protect tab of the disk Off (WRITE position).
Attn! WRONG DISK Change DISK & ENTER	**Reason**: The disk has not been initialized. **Action**: Press [STOP]. Either initialize the disk, or insert another song disk.
Error 1 RAM CHECK See owner's manual	**Reason**: The MC-50 has malfunctioned. **Action**: Contact your nearby Roland service station, or the dealer where you purchased the MC-50.
Error 3 DISK I/O See owner's manual	**Reason**: Since the system disk has been damaged (scratched, etc.), it is not possible to start up the system. Or, the disk is new (i.e., not a system disk). **Action**: Damaged disks cannot be used. Insert another system disk.

```
Error12 DISK I/O
See owner's manual
```

```
Error22 DISK I/O
See owner's manual
```

```
Error32 DISK I/O
See owner's manual
```

Reason 1: A new disk is inserted.
Action 1 : Initialize the disk on the MC - 50MK II.

Reason 2: A 2HD disk is inserted.
Action 2 : The MC - 50MK II uses only 2DD disks. It cannot use 2HD disks.

Reason 3: It is possible that the song data has been damaged, or that the disk drive is malfunctioning.
Action 3 : Insert a different song disk (that does not contain important data) and try the same operation once again. If the operation is successful, the problem is with the disk that produced the error message. Avoid using that disk. If the same message is displayed even when a different disk is inserted, it is possible that the disk drive is malfunctioning. If the disk drive is malfunctioning, it can damage disks. Contact a nearby Roland service station or your dealer.

```
Error99 DISK I/O xxx
See owner's manual
```

Reason: Disk access (reading/writing) was unsuccessful.
Action : Press [STOP]. Contact a Roland service center, giving the number in the upper right of the display, and explaining the details of your situation.

```
Not MC's SYSTEM DISK
See owner's manual!
```

Reason: The disk is not an MC - series system disk.
Action : Insert the proper disk.

Roland Exclusive Messages

1. Data Format for Exclusive Messages

Roland's MIDI implementation uses the following data format for all exclusive messages (type IV):

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
CMD	Command ID
[BODY]	Main data
F7H	End of exclusive

MIDI status : F0H, F7H

An exclusive message must be flanked by a pair of status codes, starting with a Manufacturer-ID immediately after F0H (MIDI version1.0).

Manufacturer-ID : 41H

The Manufacturer-ID identifies the manufacturer of a MIDI instrument that triggers an exclusive message. Value 41H represents Roland's Manufacturer-ID.

Device-ID : DEV

The Device-ID contains a unique value that identifies the individual device in the multiple implementation of MIDI instruments. It is usually set to 00H—0FH, a value smaller by one than that of a basic channel, but value 00H—1FH may be used for a device with multiple basic channels.

Model-ID : MDL

The Model-ID contains a value that uniquely identifies one model from another. Different models, however, may share an identical Model-ID if they handle similar data.

The Model-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Model-IDs, each representing a unique model:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Command-ID : CMD

The Command-ID indicates the function of an exclusive message. The Command-ID format may contain 00H in one or more places to provide an extended data field. The following are examples of valid Command-IDs, each representing a unique function:

01H
02H
03H
00H, 01H
00H, 02H
00H, 00H, 01H

Main data : BODY

This field contains a message to be exchanged across an interface. The exact data size and contents will vary with the Model-ID and Command-ID.

2. Address-mapped Data Transfer

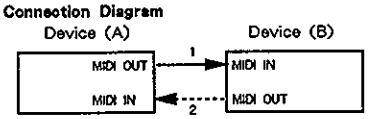
Address mapping is a technique for transferring messages conforming to the data format given in Section 1. It assigns a series of memory-resident records-waveform and tone data, switch status, and parameters, for example-to specific locations in a machine-dependent address space, thereby allowing access to data residing at the address a message specifies.

Address-mapped data transfer is therefore independent of models and data categories. This technique allows use of two different transfer procedures: one-way transfer and handshake transfer.

One-way transfer procedure (See Section 3 for details.)

This procedure is suited for the transfer of a small amount of data. It sends out an exclusive message completely independent of a receiving device status.

Connection Diagram

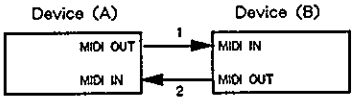


Connection at point 2 is essential for "Request data" procedures. (See Section 3.)

Handshake-transfer procedure (See Section 4 for details.)

This procedure initiates a predetermined transfer sequence (handshaking) across the interface before data transfer takes place. Handshaking ensures that reliability and transfer speed are high enough to handle a large amount of data.

Connection Diagram



Connection at points 1 and 2 is essential.

Notes on the above two procedures

*There are separate Command-IDs for different transfer procedures.
*Devices A and B cannot exchange data unless they use the same transfer procedure, share identical Device-ID and Model ID, and are ready for communication.

3. One-way Transfer Procedure

This procedure sends out data all the way until it stops and is used when the messages are so short that answerbacks need not be checked. For long messages, however, the receiving device must acquire each message in time with the transfer sequence, which inserts intervals of at least 20 milliseconds in between.

Types of Messages

Message	Command ID
Request data 1	RQ1 (11H)
Data set 1	DT1 (12H)

Request data # 1 : RQ1 (11H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQ1 message, the remote device checks its memory for the data address and size that satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set 1 (DT1)" message, which contains the requested data. Otherwise, the device will send out nothing.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
11H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

*The size of the requested data does not indicate the number of bytes that will make up a DT1 message, but represents the address fields where the requested data resides.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set 1 : DT1 (12H)

This message corresponds to the actual data transfer process.
Because every byte in the data is assigned a unique address, a DT1 message can convey the starting address of one or more data as well as a series of data formatted in an address- dependent order.

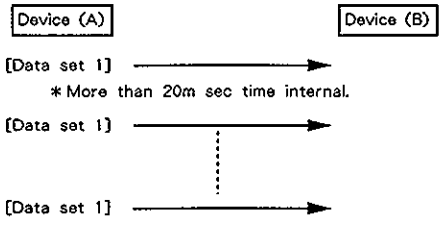
The MIDI standards inhibit non-real time messages from interrupting an exclusive one. This fact is inconvenient for the devices that support a "soft-through" mechanism. To maintain compatibility with such devices, Roland has limited the DT1 to 256 bytes so that an excessively long message is sent out in separate segments.

Byte	Description
F0H	Exclusive
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
12H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ddH	Data
⋮	⋮
sum	Check sum
F7H	End of exclusive

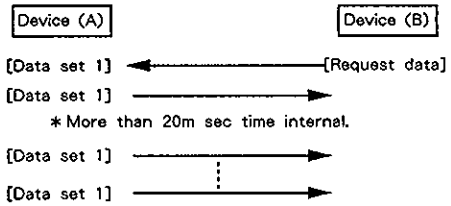
*A DT1 message is capable of providing only the valid data among those specified by an RQ1 message.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The number of bytes comprising address data varies from one Model-ID to another.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Example of Message Transactions

●Device A sending data to Device B
Transfer of a DT1 message is all that takes place.



●Device B requesting data from Device A
Device B sends an RQ1 message to Device A. Checking the message, Device A sends a DT1 message back to Device B.



4. Handshake-Transfer Procedure

Handshaking is an interactive process where two devices exchange error checking signals before a message transaction takes place, thereby increasing data reliability. Unlike one-way transfer that inserts a pause between message transactions, handshake transfer allows much speedier transactions because data transfer starts once the receiving device returns a ready signal.

When it comes to handling large amounts of data-sampler waveforms and synthesizer tones over the entire range, for example-across a MIDI interface, handshaking transfer is more efficient than one-way transfer.

Types of Messages

Message	Command ID
Want to send data	WSD (40H)
Request data	RQD (41H)
Data set	DAT (42H)
Acknowledge	ACK (43H)
End of data	EOD (45H)
Communication error	ERR (4EH)
Rejection	RJC (4FH)

Want to send data : WSD (40H)

This message is sent out when data must be sent to a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of the data to be sent.

On receiving a WSD message, the remote device checks its memory for the specified data address and size which will satisfy the request. If it finds them and is ready for communication, the device will return an "Acknowledge (ACK)" message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
40H	Command ID
aaH	Address MSB
⋮	⋮
	LSB
ssH	Size MSB
⋮	⋮
	LSB
sum	Check sum
F7H	End of exclusive

Otherwise, it will return a "Rejection (RJC)" message.
*The size of the data to be sent does not indicate the number of bytes that make up a "Data set (DAT)" message, but represents the address fields where the data should reside.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Request data : RQD (41H)

This message is sent out when there is a need to acquire data from a device at the other end of the interface. It contains data for the address and size that specify designation and length, respectively, of data required.

On receiving an RQD message, the remote device checks its memory for the data address and size which satisfy the request.
If it finds them and is ready for communication, the device will transmit a "Data set (DAT)" message, which contains the requested data. Otherwise, it will return a "Rejection (RJC)" message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
41H	Command ID
aaH ⋮	Address MSB ⋮ LSB
ssH ⋮	Size MSB ⋮ LSB
sum	Check sum
F7H	End of exclusive

*The size of the requested data does not indicate the number of bytes that make up a "Data set (DAT)" message, but represents the address fields where the requested data resides.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The same number of bytes comprises address and size data, which, however, vary with the Model-ID.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Data set : DAT (42H)

This message corresponds to the actual data transfer process.
Because every byte in the data is assigned a unique address, the message can convey the starting address of one or more data as well as a series of data formatted in an address-dependent order.

Although the MIDI standards inhibit non-real time messages from interrupting an exclusive one, some devices support a "soft-through" mechanism for such interrupts. To maintain compatibility with such devices, Roland has limited the DAT to 256 bytes so that an excessively long message is sent out in separate segments.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
42H	Command ID
aaH ⋮	Address MSB ⋮ LSB
ddH ⋮	Data ⋮
sum	Check sum
F7H	End of exclusive

*A DAT message is capable of providing only the valid data among those specified by an RQD or WSD message.
*Some models are subject to limitations in data format used for a single transaction. Requested data, for example, may have a limit in length or must be divided into predetermined address fields before it is exchanged across the interface.
*The number of bytes comprising address data varies from one model ID to another.
*The error checking process uses a checksum that provides a bit pattern where the least significant 7 bits are zero when values for an address, size, and that checksum are summed.

Acknowledge : ACK (43H)

This message is sent out when no error was detected on reception of a WSD, DAT, "End of data (EOD)", or some other message and a requested setup or action is complete. Unless it receives an ACK message, the device at the other end will not proceed to the next operation.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
43H	Command ID
F7H	End of exclusive

End of data : EOD (45H)

This message is sent out to inform a remote device of the end of a message. Communication, however, will not come to an end unless the remote device returns an ACK message even though an EOD message was transmitted.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
45H	Command ID
F7H	End of exclusive

Communications error : ERR (4EH)

This message warns the remote device of a communications fault encountered during message transmission due, for example, to a checksum error. An ERR message may be replaced with a "Rejection (RJC)" one, which terminates the current message transaction in midstream.

When it receives an ERR message, the sending device may either attempt to send out the last message a second time or terminate communication by sending out an RJC message.

Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
4EH	Command ID
F7H	End of exclusive

Rejection : RJC (4FH)

This message is sent out when there is a need to terminate communication by overriding the current message. An RJC message will be triggered when:

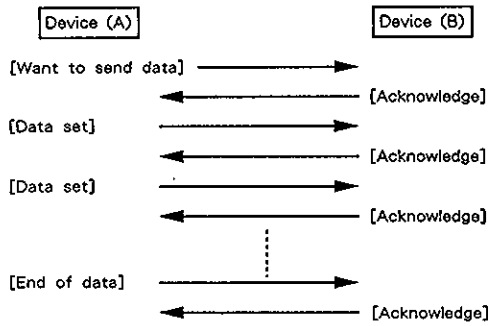
- a WSD or RQD message has specified an illegal data address or size.
- the device is not ready for communication.
- an illegal number of addresses or data has been detected.
- data transfer has been terminated by an operator.
- a communications error has occurred.

An ERR message may be sent out by a device on either side of the interface. Communication must be terminated immediately when either side triggers an ERR message.

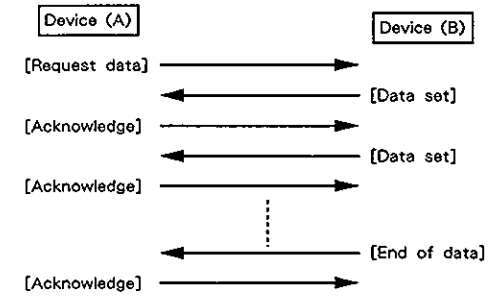
Byte	Description
F0H	Exclusive status
41H	Manufacturer ID (Roland)
DEV	Device ID
MDL	Model ID
4FH	Command ID
F7H	End of exclusive

Example of Message Transactions

●Data transfer from device (A) to device (B).

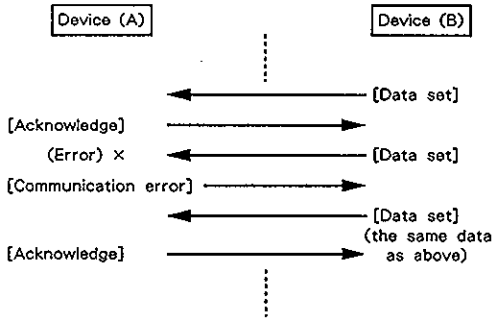


●Device (A) requests and receives data from device (B).

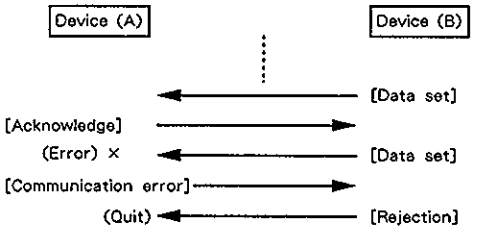


●Error occurs while device (A) is receiving data from device (B).

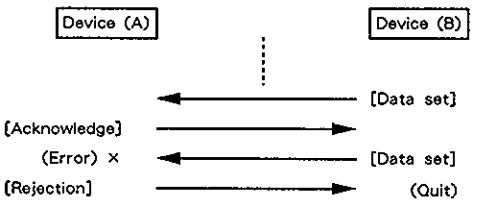
1) Data transfer from device (A) to device (B).



2) Device (B) rejects the data re-transmitted, and quits data transfer.



3) Device (A) immediately quits data transfer.



SUPER-MRC/SUPER-MRP System

Model MC-50

MIDI Implementation

Date : Mar. 31 1990

Version : 1.00

1. RECOGNIZED RECEIVE DATA (SUPER-MRC System)

1.1 Messages memorized in RECORD mode

■Channel Voice Message

●Note off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Velocity : 00H—7FH (0—127)

*8n kk vv is memorized as 9n kk 00.

●Note on

Status	Second	Third
9nH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Velocity : 01H—7FH (1—127)

●Polyphonic key pressure

Status	Second	Third
AnH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Note number : 00H—7FH (0—127)
vv = Value : 00H—7FH (0—127)

*Received and memorized when PAf in MIDI 2 RCV STATUS is ON.

●Control change

Status	Second	Third
BnH	kkH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Control number : 00H—78H (0—120)
vv = Value : 00H—7FH (0—127)

*Received and memorized when CCa (control number 0—63) and CCb (control number 64—120) in MIDI 2 RCV STATUS are ON.

●Program change

Status	Second
CnH	ppH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
pp = Program number : 00H—7FH (0—127)

*Received and memorized when PG in MIDI 2 RCV STATUS is ON.

●Channel pressure

Status	Second
DnH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
vv = Value : 00H—7FH (0—127)

*Received and memorized when CAf in MIDI 2 RCV STATUS is ON.

●Pitch bend change

Status	Second	Third
EnH	mmH	llH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
mm,ll = Value : 00H,00H—7FH,7FH 0—16383 (−8192—+8191)

*Received and memorized when PB in MIDI 2 RCV STATUS is ON.

■Channel Mode Message

●Local ON/OFF

Status	Second	Third
BnH	7AH	vvH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
vv = Value : 00H—7FH (0—127)

*Received and memorized as specified in CCb.

■System Exclusive Message

Status	data
F0H	iiH,ddH, ···· ,eeH
F7H	

F0 : System Exclusive
ii = ID number : 00H—7FH (0—127)
dd, ···· ,ee = data : 00H—7FH (0—127)
F7 : EOX (End of Exclusive/System common)

*Received and memorized when EX in MIDI 2 RCV STATUS is ON. The number of data bytes varies according to the setting of THRU (Soft THRU) in MIDI 3 XMT CONDITION.

■System Common Message

●Tune request

Status
F6H

1.2 Messages not memorized in RECORD mode

■Channel Mode Message

●Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*When MC-50 receives this message, it produces and memorized Note off message for notes remains on.

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●OMNI ON

Status	Second	Third
BnH	7DH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●MONO

Status	Second	Third
BnH	7EH	mmH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognizes only as All Notes Off.

1.3 Recognized messages for sync

Recognized when FUNC 1 SYNC CLOCK is MIDI.

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

mm,ll = Value : 00H,00H—7FH,7FH 0—16383

*Received when SUPER - MRC is in standby mode.

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—7FH 0—127

*Received when SUPER - MRC is in standby mode.

■System Realtime Message

●Timing clock

Status
F8H

●Start

Status
FAH

●Continue

Status
FBH

●Stop

Status
FCH

1.4 Messages received for detecting trouble in MIDI connection

■System Realtime Message

●Active sensing

Status
FEH

*Having received Active Sensing, SUPER - MRC automatically terminates recording if a MIDI message is not followed by a MIDI message within about 420 ms.

2. TRANSMITTED DATA (SUPER - MRC System)

2.1 Transmitted messages in playback mode

The stored messages are transmitted when song data is played back.

2.2 Tansmitted messages which are received

When THRU (Soft THRU) is set in MIDI 3 XMT CONDITION, SUPER - MRC transmits received message (except All Notes Off, System Common Messages and System Realtime Messages).The following messages can be selectively set to ON or OFF.

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted when all notes are turned off in a specific channel.

2.3 Created message

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

Transmitted when all notes are turned off in a specific channel.

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

■System Realtime Message

●Active sensing

Status
FEH

*Transmitted when ActS in MIDI 3 XMT CONDITION is ON.

2.4 Created messages for sync

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

mm,ll = Value : 00H,00H—7FH,7FH 0—16383

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—7FH 0—127

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

■System Realtime Message

●Timing clock

Status
F8H

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Start

Status
FAH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Continue

Status
FBH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

●Stop

Status
FCH

*Transmitted when CLK in MIDI 3 XMT CONDITION is ON.

2.5 Messages generated upon execution of a function

2.5.1 Messages generated upon execution of UTIL 8

■Channel Voice Message

●Note off

Status	Second	Third
9nH	45H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●Note on

Status	Second	Third
9nH	45H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

■System Common Message

●Tune request

Status
F6H

2.5.2 Generated upon execution of [STOP] + [MIDI]

■Channel Voice Message

●Control change

Status	Second	Third
BnH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = Control number : 01H,40H (1, 64)

*Transmitted over all channels.

●Channel pressure

Status	Second
DnH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●Pitch bend change

Status	Second	Third
EnH	00H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

■Channel Mode Message

●Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted over all channels.

3. RECOGNIZED RECEIVE DATA (SUPER-MRP System)

3.1 Recognized only

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*When SUPER-MRP receives this message, it produces Note off message for received notes remains on.

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

●OMNI ON

Status	Second	Third
BnH	7DH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

●MONO

Status	Second	Third
BnH	7EH	mmH

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
mm = Number of MIDI channel : 00H—0FH (0—15)

* Recognized only as All Notes off.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Recognized only as All Notes off.

3.2 Recognized messages for sync

Recognized when SYNC CLOCK (FUNC 1 in the song file) is MIDI.

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

ll, mm = Value : 00H, 00H—7FH, 7FH 0—16383

*Only received when SUPER-MRP is in standby mode.
*Received REMOTE (CONFIG 2) is ON.

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—62H 0—98

*Only received when SUPER—MRP is in standby mode.
*Received REMOTE (CONFIG 2) is ON.

■System Realtime Message

●Timing clock

Status
F8H

●Start

Status
FAH

*Received REMOTE (CONFIG 2) is ON.

●Continue

Status
FBH

*Received REMOTE (CONFIG 2) is ON.

●Stop

Status
FCH

*Received REMOTE (CONFIG 2) is ON.

3.3 Message received for detecting trouble in MIDI connection

■System Realtime Message

●Active sensing

Status
FEH

4. TRANSMITTED DATA (SUPER-MRP System)

4.1 Transmitted messages in playback mode

The stored messages are transmitted when song data is played back.

4.2 Transmitted messages which are received

When THRU (Soft THRU) is set in the system configuration file, SUPER-MRP transmits received message (except System Common Message and System Realtime Message).

4.3 Created message

■Channel Mode Message

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted when all notes are turned off in a specific channel.
*This message can be selectively set to ON or OFF (MIDI 3 AOff in the system configuration file).

●OMNI OFF

Status	Second	Third
BnH	7CH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

●POLY

Status	Second	Third
BnH	7FH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted on all channels (1—16) upon starting of the system program.

■System Realtime Message

●Active sensing

Status
FEH

*Transmitted when MIDI 3 ActS (in the system cofiguration file) is ON.

4.4 Created messages for sync

Transmitted when MIDI 3 CLK (in the system configuration file) is ON.

■System Common Message

●Song position pointer

Status	Second	Third
F2H	mmH	llH

ll, mm = Value : 00H, 00H—7FH, 7FH 0—16383

●Song select

Status	Second
F3H	ssH

ss = Value : 00H—62H 0—98

■System Realtime Message

●Timing clock

Status
F8H

●Start

Status
FAH

●Continue

Status
FBH

●Stop

Status
FCH

4.5 Genaration upon execution of [STOP]+[MIDI]

■Channel Voice Message

●Control change

Status	Second	Third
BnH	kkH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16
kk = control number : 01H, 40H (1, 64)

*Transmitted all over channels.

●Channel pressure

Status	Second
DnH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

●Pitch bend change

Status	Second	Third
EnH	00H	40H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

■Channel Mode Message

●Reset All Controllers

Status	Second	Third
BnH	79H	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

●All Notes off

Status	Second	Third
BnH	7BH	00H

n = MIDI channel number : 0H—FH (0—15) 0 = ch.1 15 = ch.16

*Transmitted all over channels.

SUPER-MRC System
Model MC-50

MIDI Implementation Chart

Date : Mar. 31 1990
Version : 1.00

Function •••		Transmitted	Recognized	Remarks
Basic Channel	Default	All Ch	All Ch	not BASIC ch
	Changed	×	1 – 16 each	
Mode	Default	Mode 3	×	＊2
	Messages	OMNI OFF, POLY	×	
	Altered	＊＊＊＊＊＊＊＊＊		
Note Number		0 – 127	0—127	
	True Voice	＊＊＊＊＊＊＊＊＊	0—127	
Velocity	Note ON	○	○	
	Note OFF	× 9n v = 0	×	
After Touch	Key's	○	＊1	
	Ch's	○	＊1	
Pitch Bender		○	＊1	
Control Change	0—63	○	＊1	
	64—120	○	＊1	
	121	○	×	
Prog Change		○	＊1	
	True #	＊＊＊＊＊＊＊＊＊	0 – 127	
System Exclusive		○	＊1	
System Common	Song Pos	＊1	○ (SYNC = MIDI)	
	Song Sel	＊1	○ (SYNC = MIDI)	
	Tune	○	×	
System Real Time	Clock	＊1	○ (SYNC = MIDI)	
	Commands	＊1	○ (SYNC = MIDI)	
Aux Message	Local ON/OFF	○	＊1	
	All Notes OFF	＊1 (123)	○ (123 – 127)	
	Active Sense	＊1	○	
	Reset	×	×	
Notes		＊1 Can be set to ○ or × manually. ＊2 When SUPER-MRC is first booted up, OMNI OFF, POLY ON are sent for all channels (1—16).		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

○ : Yes
× : No

SUPER-MRP System
Model MC-50

MIDI Implementation Chart

Date : Mar. 31 1990
Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	All Ch	×	not BASIC ch
	Changed	×	×	
Mode	Default	Mode 3	×	
	Messages	OMNI OFF, POLY	×	*2
	Altered	*********		
Note Number	True Voice	0 - 127	×	
		*********	×	
Velocity	Note ON	○	×	
	Note OFF	× 9n v=0	×	
After Touch	Key's	○	×	
	Ch's	○	×	
Pitch Bender		○	×	
Control Change	0—120	○	×	
	121	○	×	
Prog Change		○	×	
	True #	*********	×	
System Exclusive		○	×	
System Common	Song Pos	*1	○ (SYNC = MIDI or REMOTE = ON)	
	Song Sel	*1	○ (SYNC = MIDI or REMOTE = ON)	
	Tune	○	×	
System Real Time	Clock	*1	○ (SYNC = MIDI)	
	Commands	*1	○ (SYNC = MIDI or REMOTE = ON)	
Aux Message	Local ON/OFF	○	×	
	All Notes OFF	*1 (123)	○ (123—127)	
	Active Sense	*1	○	
	Reset	×	×	
Notes		*1 Can be set to ○ or × by system configuration file. *2 When SUPER-MRP is first booted up, OMNI OFF, POLY ON are sent for all channels (1—16).		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

○ : Yes
× : No

■ How to read a MIDI Implementation Chart

○ : MIDI messages that can be transmitted or received.
× : MIDI messages that cannot be transmitted or received.

● Basic Channel

These are the Transmit (Receive) channels when the power is turned on, and the range of channel numbers that can be used. The MC-50 handles messages of all MIDI channels in the same way, and has no real basic channel.

● Mode

Most recent keyboards use mode 3 (omni off, poly).
Receive : Only the MIDI messages of the specified MIDI channel will be received, and will be played polyphonically.
Transmit : MIDI messages will be transmitted on the specified MIDI channel.

* "Mode" refers to MIDI Mode messages.

● Note Number

This is the range of note numbers that can be transmitted (or received). Note number 60 is middle C (C4).

● Velocity

This is the range over which velocity can be transmitted (or received) by Note On and Note Off messages.

● Aftertouch

Key's : Polyphonic Aftertouch
Ch's : Channel Aftertouch

● Control Change

These are the control numbers which can be transmitted (received). The control functions will differ for each type of MIDI device.

● Program Change

The listed program numbers are the numbers of the data, and are one less than the program numbers displayed in Microscope mode.

● Common, Realtime

Tune is a Tune Request message that tells MIDI sound modules to tune themselves to standard pitch. Other MIDI messages in this category are used to synchronize sequencers, etc.

● Aux Messages

Mainly, these messages are of the type used to prevent problems, such as Active Sensing (Checks whether MIDI cable is in proper condition or not) ; and All Notes Off (Message which terminates the sounding of all notes).

Specifications

MC-50: Micro Composer

☐ Hardware

● Memory capacity
256 Kbytes (RAM)
512 Kbytes (ROM)

● Disk drive
Micro floppy disk (3.5 inch, 2DD), built - in

● Display
LCD type (20 character × 2 lines, with backlight)

● Terminals
MIDI connectors (IN / OUT × 2 / THRU)
Start/Stop jack
Punch in/out jack
Metronome output jack
Tape sync II jack (RCA pin)

Input level	− 20—0 dBm
Input impedance	50 k ohm
Output level	− 10 dBm (50 k ohm load)
Output impedance	less than 1 k ohm
	(0 dBm = 0.775 V rms)

● Dimensions
280 (W) × 271 (D) × 47 (H) mm
11 (W) × 10 - 11/16 (D) × 1 - 7/8 (H) inches

● Weight
1.8 kg / 3 lb. 15 oz.

● Current Rating
800 mA

☐ SUPER-MRC / SUPER-MRP

● Tracks

Phrase Tracks (16 MIDI channels per track)	8
Rhythm Track (Rhythm Pattern combination type)	1
Tempo Track	1

● Song data (internal memory capacity)

Songs	8
Note capacity	approx. 40,000 notes
Song length	9999 measures, or quarter note × 87381
Number of rhythm instruments	32 (independent MIDI channels)
Number of Rhythm patterns	240 (per song)

● Resolution

Phrase Tracks	96 clocks / quarter note
Rhythm Pattern	32nd note (independent instruments)

● Data input method
Realtime / Step

● Maximum simultaneous input notes (during realtime recording)
64 notes

● Maximum simultaneous output notes
64 notes / track

● Tempo
10—250 (Basic Tempo)
5—500 (Tempo Track)

● Time signatures
1—32/16, 1—32/8, 1—32/4, 1—32/2

● Sequence data

Banks	26 (A—Z)
Number of song files	99 (32 per Bank)

☐ Disk

Disk capacity	720 Kbyte
Song files	108
Note storage	approx. 150,000 notes
Configuration file	1
Sequence file	1

☐ Accessories
Manual I (USER'S GUIDE), II (REFERENCE)
AC Adaptor (ACI - 120 (117V), ACI - 220 (220V), ACB - 240E / 240A(240V))
Micro floppy disk (3.5 inch, 2DD)
MIDI cable (1.0 m)

* The included MIDI cable is only for MIDI. It cannot be used for other purposes.

☐ Options

Micro floppy disk (3.5 inch, 2DD)	MF - 2DD
Pedal switch	DP - 2, BOSS FS - 5U

* In the interest of product improvement, the specifications of this unit are subject to change without prior notice.

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26045104 '95-9-AE2-71D

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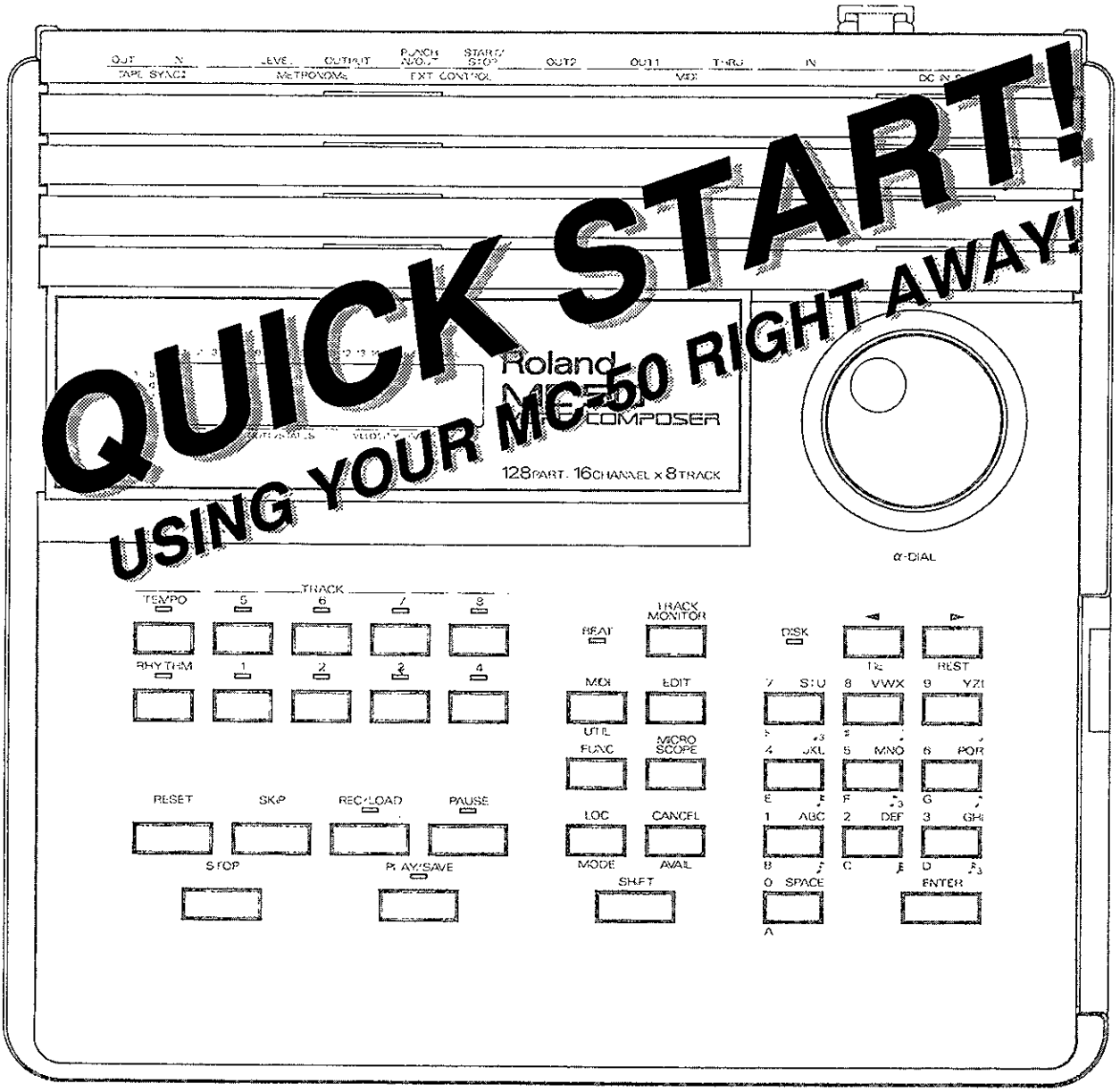

QUICK START!

USING YOUR MC-50 RIGHT AWAY!

Roland

MICRO COMPOSER

MC-50

This Quick Start guide is intended to get you up and running with the MC-50 Micro Composer as soon as possible. Even if you have little or no experience with MIDI sequencers, this guide will help you achieve results quickly. Experienced sequencer users can also benefit from the guide's direct, operation-oriented approach.

The MC-50 is a fully professional MIDI sequencer and includes extensive recording and editing features. This guide provides step-by-step instructions for only the unit's *most basic functions* and therefore is *not* intended to replace the original two-volume Owner's Manual. To fully realize the MC-50's potential, we strongly recommend that you take the time to read these manuals (***User's Guide [Vol. I]*** and ***Reference [Vol. II]***) in their entirety.

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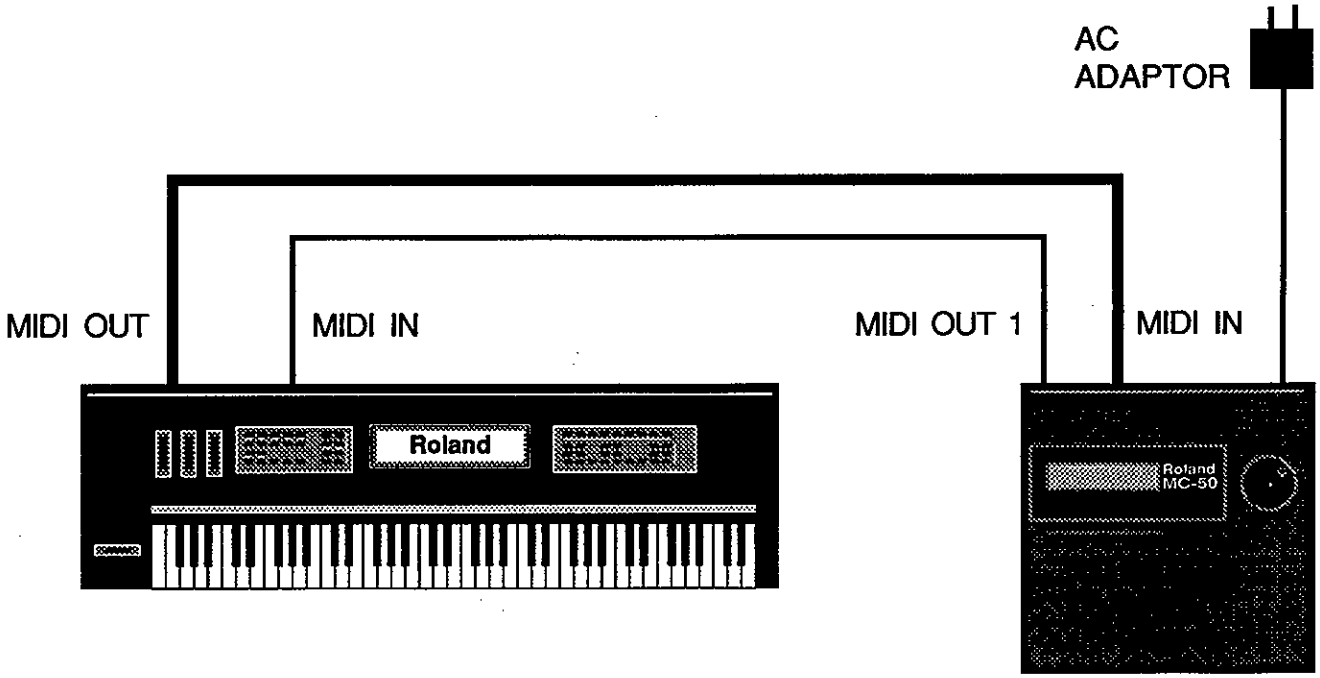
SETTING UP

1. Place the MC-50 on a solid, level surface.

2. Connect the supplied AC power adaptor to the unit.

3. With the power off to both the MC-50 and your keyboard:
   - Connect the two devices using MIDI cables as shown in the following diagram:



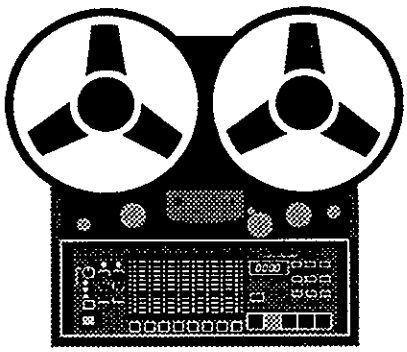
POWER UP

*** Be sure there is no disk in the MC-50's internal disk drive.

*** Also be sure the volume on your amplifier (monitor system) is turned down.

4. **Turn on your keyboard *and then* turn on the MC-50.**

RECORDING & PLAYBACK (REALTIME)



Immediately after power up, the unit is in the **Standby mode** - the point from which recording and playback begins:

```
SONG 1
M=   1   ♩ = 120     REAL
```

1. Press REC/LOAD. *The following display will appear:*

```
Press PLAY  > >   RECORD
M=   1   ♩ = 120   REAL
```

The unit is ready to record a new Song with a 4/4 time signature at a tempo of 120 beats per minute (bpm). To change the basic tempo, use the cursor buttons (◄ ►) to select the tempo display (so it begins to flash) and then rotate the Alpha dial.

The REC/LOAD and TRACK 1 indicators will flash and the metronome will "beep" at the selected tempo. (Adjust the metronome volume with the control on the rear panel). Recording will take place on TRACK 1, in SONG position number 1.

2. Press PLAY/SAVE *(the metronome will give you a two bar "count-in" before recording actually begins).*

3. Play the keyboard.

4. Press STOP when you are finished playing. *The unit will automatically return to the Standby mode and the measure indicator (M=) will display the number of measures you have just recorded.*

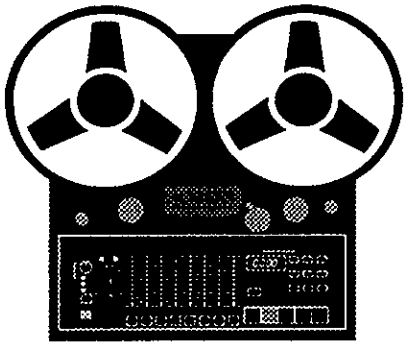
5. Press RESET to move to the beginning of the track *(or rotate the Alpha dial to select any measure you have just recorded).*

6. Press PLAY/SAVE to hear the track. *During playback you can vary the tempo by rotating the Alpha dial: the tempo can be varied from 10-250 bpm.*

If you are unsatisfied with the recording you have just made, simply record the track over again:

- *Press RESET to move back to the beginning of the track.*
- *Press REC/LOAD.*
- *Press PLAY/SAVE and record the track again.*

OVERDUBBING (MULTI-TRACK RECORDING)



After you have recorded the first track to your satisfaction, you can begin to add additional tracks to enhance your Song. (By the way, it doesn't matter what you have recorded at this point - anything will do!)

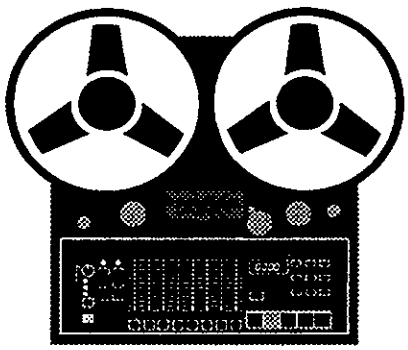
The first part was recorded on TRACK 1 so we'll record the second part on TRACK 2.

From the Standby mode (press RESET to move to the beginning of the track):

1. Press REC/LOAD.
2. Press the TRACK 2 button. *This selects TRACK 2 as the track we'll record on.*
3. Press PLAY/SAVE.
4. When recording starts, you will hear the first track that you recorded. Play along with it and record the second track.
5. Press STOP when you are finished recording.
6. Press RESET to move to the beginning of the piece.
7. Press PLAY/SAVE to hear the two tracks together.

   If you don't want to hear a particular track during playback, simply press its TRACK button (the indicator light will go out) and the track will be muted.

RECORDING & PLAYBACK (STEPTIME)



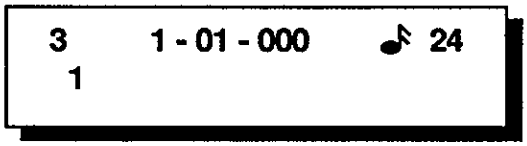
The Steptime recording method is a process which allows you to record notes and rests individually. Using this method you actually build a track one step (or beat) at a time.

From the Standby mode (press RESET to move to the beginning of the track):

1. Select the **Record mode** display [the word "REAL"] with the cursor buttons - the display will start to flash. Rotate the Alpha dial (clockwise) to select "STEP".

2. Press REC/LOAD.

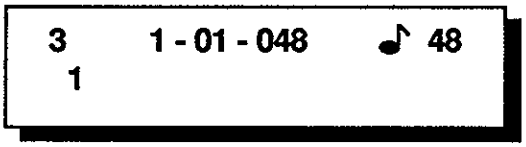
3. Press the TRACK 3 button (we'll save what's on TRACKS 1 and 2). Press ENTER. *The display should now read:*



We are now ready to start entering notes and rests one at a time.

4. If the first note (rest) you want to enter is an 8th note (rest) , for example, select the 8th note symbol (♪) by rotating the Alpha dial (clockwise).

5. On your keyboard, press and release the first note of the track. *(Or hold SHIFT and press the right cursor button (REST) to enter a rest.) The display will now read:*



The position indicator has advanced by the value of one 8th note (or 48 'clocks').

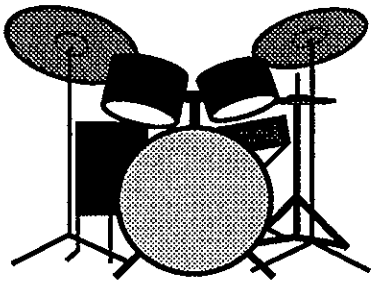
6. Select the next note (or rest) value with the Alpha dial. Locate the desired note on the keyboard: press it once and release it. Or hold SHIFT and press REST.

Continue adding notes and rests in this way until the track is complete.

7. Press STOP when the track is complete.

8. Press RESET and then press PLAY/SAVE to hear the track. *(Be sure to mute TRACKS 1 and 2 by pressing their TRACK buttons - that way you'll only hear what's on TRACK 3. If you want to hear all the tracks together, simply press TRACK buttons 1 and 2 again - all three TRACK indicators should be lit.)*

RECORDING A RHYTHM PATTERN (REALTIME)



Individual, one-measure Rhythm patterns form the basis of the Rhythm track. (These one-measure patterns are later arranged in a Rhythm track.) *To create Rhythm patterns, you will need a keyboard (or sound module) which contains a selection of percussion sounds - eg., Roland's U-20, D-5, Rhodes 760 etc.* ***NOTE: before beginning to record Rhythm patterns, set your keyboard to transmit MIDI data on channel 10.***

From the Standby mode:

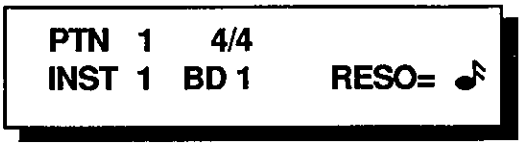
1. Set the basic tempo. Set the Record mode to RHYTHM *(use the Alpha dial).*

2. Press REC/LOAD.

3. Select R-PATTERN *(use the Alpha dial).*

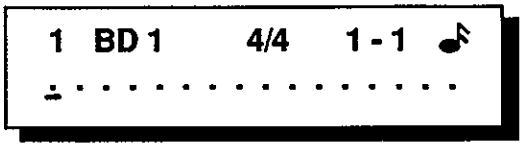
4. Press ENTER twice (this selects pattern number 1).

5. Set the time signature. 4/4 will be fine for now so press ENTER twice to advance to the next window. *The display will now read:*



6. Press the right cursor button *(for Realtime recording the INST display is not relevant).*

7. Set the resolution for the pattern you want to create. *If the shortest notes in your pattern will be 16th notes, for example, select the 16th note symbol.* Press ENTER. *The display will now read:*

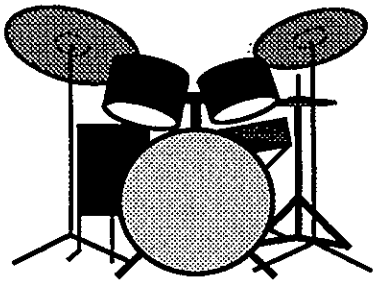


8. Press and hold SHIFT and then press PLAY/SAVE. *(Press PAUSE to temporarily stop the pattern if you wish; pressing STOP will take you back to the Standby mode. Press and hold SHIFT and then press PLAY/SAVE to start the pattern playing again.)*

9. Play a simple one measure pattern on the keyboard and the MC-50 will play it back repeatedly. *You can build on the pattern by playing new parts while the rhythm is running. You will hear these new parts as the measure is played over and over.*

10. Press STOP when the Rhythm pattern is complete. *You will automatically return to the Standby mode.*

RECORDING A RHYTHM PATTERN (STEPTIME)



Creating a Rhythm pattern by the Steptime method is a little more time consuming than Realtime creation, but is not really that complicated - follow the example and see!

From the Standby mode:

1. Set the basic tempo. Select RHYTHM as the Record mode *(use the Alpha dial).*

2. Press REC/LOAD.

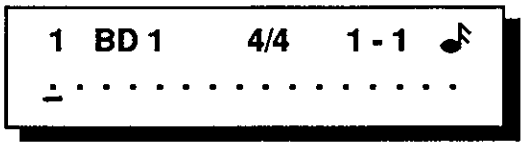
3. Select R-PATTERN *(with the Alpha dial)* and press ENTER.

4. Press keypad key 2 (to select pattern 2); *save the pattern stored in number 1.*

5. Press ENTER. Set the time signature; we'll use 4/4 so press ENTER twice.

6. The **INST** display indicates which instrument you are going to be working with. *1 BD 1 indicates Bass Drum #1. (To select the sound you want to work with, use the Alpha dial or use SKIP and RESET).* We'll use this sound so just press ENTER.

7. Set the resolution for the pattern. *(Select the 16th note symbol, for example).* Press ENTER. *The following display will appear:*



The row of dots (or the "grid") corresponds to the resolution you have set. For example, because you set the resolution to equal a 16th note, the grid has 16 dots. Each dot represents one 16th note in the 4/4 measure - the first dot corresponds to the first 16th note, the second dot corresponds to the second 16th note and so on.

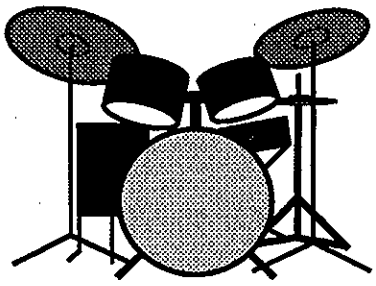
8. Press and hold SHIFT and then press PLAY/SAVE. *The one measure will be "looped" and will play over and over. (Press PAUSE to temporarily stop the pattern.)*

9. Suppose you want to construct a "standard" bass drum pattern, for example:
   - Since the cursor is on the first 16th note of the bar, press keypad key 8.
     You'll now hear the bass drum on the first beat of the bar.
   - Press the right cursor button 5 times. Press keypad key 6 *(a lower volume code).*
   - Press the right cursor button. Press keypad key 8. *The pattern is now complete.*

10. Press ENTER when the pattern is complete. Press the left cursor button. Use the Alpha dial to select the next instrument to add to the Rhythm pattern. Press ENTER twice. *Place the new instrument sound on the desired steps of the pattern.*

11. Press STOP when the entire Rhythm pattern is complete.

THE RHYTHM TRACK



As mentioned earlier, the Rhythm track is constructed from the individual Rhythm patterns that you have created. Quite simply, the Rhythm track contains the playback sequence of the individual Rhythm patterns.

From the Standby mode (Press RESET and then mute TRACKS 1, 2 & 3):

1. Select the Song number the Rhythm track is for *(it should be the same Song number under which the Rhythm patterns were created - in this case, probably Song 1).*

2. Select RHYTHM as the Record mode *(use the Alpha dial).*

3. Press REC/LOAD.

4. Select R-TRACK and press ENTER. *The display will read:*

```
R-TRK MEAS    1    */*
  PTN:  R
```

5. Press ENTER. *This selects the first measure in the Rhythm track. The cursor will move to the* ***PTN: R*** *(REST Pattern - see page 49 of Vol. 1 "User's Guide") portion of the display.*

6. Enter the ***number*** of the Rhythm pattern that will occur during the first measure of the Rhythm track - most likely you'll only have patterns 1 and 2 to choose from *(use the keypad or Alpha dial).* Press ENTER. *The display will read:*

```
R-TRK MEAS    1    4/4
  PTN:  1   BIAS:   0
```

7. Press ENTER.

8. Select the pattern that will occur in the *second* measure of the Rhythm track (enter the pattern number).

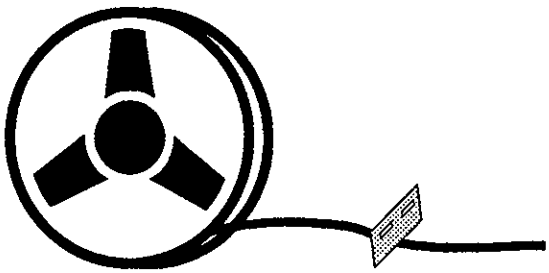
9. Press ENTER twice.

   Proceed in this manner until the entire Song structure is complete with the correct sequence of Rhythm patterns.

10. Press STOP when the Rhythm track is complete.

11. Press RESET to move to the beginning of the track and press PLAY/SAVE to hear the end result.

EDITING
(COPYING SECTIONS OF A SONG)



The MC-50 provides a comprehensive selection of editing functions. The Copy function allows you to copy a portion of a Song to another location within the Song. This is very useful for the millions of Songs which contain recurring sections!

From the Standby mode (press RESET to move to the beginning of your Song):

1. Press EDIT.
2. Rotate the Alpha dial to select **EDIT 10 COPY.**
3. Press ENTER. *The display will read:*

```
EDIT 10 COPY
SONG 1 ► SONG 1
```

The unit is now ready to copy a part of your Song to another location within that Song.

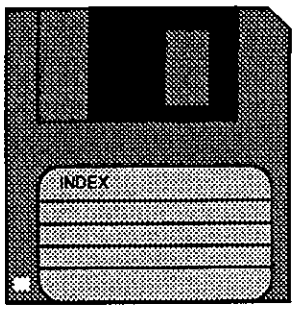
4. Press ENTER. *The unit is ready to copy all of your tracks.* Press ENTER.
5. Press ENTER. *The unit is ready to copy all the measures of your Song beginning with measure number 1:*

```
EDIT 10 COPY
FROM M=    1   FOR ALL
```

6. Press ENTER.
7. Press ENTER. *The MC-50 is now ready to copy the measures selected in step 5 (ie., all the measures) to the end of your Song.*
8. Press ENTER. *The unit is ready to copy the selected section once.* Press ENTER.
9. *The MC-50 asks you if you really want to copy that specified section -*
   Press REC/LOAD if you wish to proceed (press STOP to cancel).
10. Press STOP when the process is complete.
11. Press PLAY/SAVE to hear the edited track - it will now be twice as long.

NOTE: Because TRACKS 1, 2 & 3 have been muted, you will only hear the edited version of the Rhythm track. If you want to hear the edited version of the entire Song, simply press TRACK buttons 1, 2 & 3 so that all indicators are lit.

DISK FUNCTIONS



The MC-50 contains an internal memory bank which provides temporary storage for all the tracks and Rhythm patterns that you create during your work session. **However, if you turn the MC-50 off while you are working, all of that internal data will be lost.** This is why the unit contains a disk drive; the drive allows you to store all of your data on floppy disks.

Before a disk can be used by the MC-50 it must be ***initialized*** or prepared by the unit.

TO INITIALIZE A DISK

1. Attach a label to an MF 2DD floppy disk (the disk included with the unit) and then set the protect tab on the disk to the "WRITE" position.
2. Insert the disk into the drive (label side up and metal shutter first!).
3. Press and hold SHIFT and then press MODE.
4. Press keypad key 4 and then press ENTER twice.
5. Press ENTER.

   When initialization is complete, the display will read:

INIT Complete!	**Cont?**
Yes: ENTER	**No: STOP**

6. Press STOP when you have initialized all of the disks that you require.
7. Press and hold SHIFT and then press MODE.
8. Press ENTER *(to return to the Standby mode).*

SAVING DATA TO DISK

Now that you have an initialized disk(s), you can store your work for future use.

Songs in the unit's internal memory are distinguished by *number*. Songs stored on disk are distinguished by *Song name* (title). In order to store a Song on disk it must first be given a name.

TO NAME A SONG:

From the Standby mode:

1. Select the Song you wish to save (*use the cursor buttons to select the SONG number display and then rotate the Alpha dial).*

2. Press FUNC, then keypad key 3, and then ENTER.
The following display will appear:

3. You can now give your Song a name of up to 13 characters. *The characters for the name are entered from the keypad. Each keypad key contains 4 characters (eg., key 1 contains the characters 1, A, B and C). Pressing the key repeatedly will cycle through those characters. If you want to enter lower case characters, hold SHIFT while you press the keys. Once you have entered the desired character, press the right cursor button to advance to the next space.*

4. Press STOP when the name is complete.

5. Insert an initialized disk into the drive.

6. Press and hold SHIFT and then press AVAIL (*to check the amount of memory used by the Song).*

7. Press MICROSCOPE *(to check the amount of free memory on the disk).*

8. Press and hold SHIFT and then press PLAY/SAVE *(to save the Song to disk).*

LOADING DATA FROM DISK

In order to use the data stored on a floppy disk, the data must be loaded into the MC-50's internal memory.

1. Insert the disk containing the data into the drive.

2. Select a Song number that does not contain any data *(hold SHIFT and rotate the Alpha dial).*

3. Press and hold SHIFT and then press AVAIL.

4. Press MICROSCOPE.

5. Select the Song to be loaded into memory *(use the Alpha dial).*

6. Press REC/LOAD.